WO 2004/030615 PCT/US2003/028547

3384/6881 FIGURE 3119

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3385/6881 FIGURE 3120

CCGCCCTCTCGCCTTCGCCGAACCAAAGTGGATTAATTACACGCTTTCTGTTTCTCTCCGTGCTGTTCTCTCCCG TGTCTCTCCCACTATCTCTGCCCCCCTCTATCCTTGATACAACAGCTGACCTCATTTCCCGATACCTTTTCCCCCC CCGAAAAGTACAACATCTGGCCCGCCCCAGCCCGAAGACAGCCCGTCCTCCCTGGACAATCAGACGAATTCTCCC CCCCCCCAAAAAAAAAAAAGCCATCCCCCGCTCTGCCCCGTCGCACATTCGGCCCCGCGACTCGGCCAGAGCG GCGCTGGCAGAGGAGTGTCCGGCAGGAGGGCCAACGCCCGCTGTTCGGTTTGCGACACGCAGCAGGAGGTGGGC GGCAGCGTCGCCGGCTTCCAGACACCAATGGGAATCCCAATGGGGAAGTCGATGCTGGTGCTTCTCACCTTCTTG GCCTTCGCCTCGTGCTGCATTGCTGCTTACCGCCCCAGTGAGACCCTGTGCGGCGGGGAGCTGGTGGACACCCTC CAGTTCGTCTGTGGGGACCGCGGCTTCTACTTCAGCAGGCCCGCAAGCCGTGTGAGCCGTCGCAGCCGTGGCATC GTTGAGGAGTGCTGTTTCCGCAGCTGTGACCTGGCCCTCCTGGAGACGTACTGTGCTACCCCCGCCAAGTCCGAG AGGGACGTGTCGACCCTCCGACCGTGCTTCCGGACAACTTCCCCAGATACCCCGTGGGCAAGTTCTTCCAATAT ${\tt GCCCACGGGGGCCCCCCCAGAGATGGCCAGCAATCGGAAG{\tt TGA}GCAAAACTGCCGCAAGTCTGCAGCCCGGCG}$ CCACCATCCTGCAGCCTCCTGACCACGGACGTTTCCATCAGGTTCCATCCCGAAAATCTCTCGGTTCCACGT CCCCCTGGGGCTTCTCCTGACCCAGTCCCCGTGCCCCGCCTCCCGAAACAGGCTACTCTCCTCGGCCCCCTCCA TCGGGCTGAGGAAGCACAGCAGCATCTTCAAACATGTACAAAATCGATTGGCTTTAAACACCCTTCACATACCCT CCCCCC

MGIPMGKSMLVLLTFLAFASCCIAAYRPSETLCGGELVDTLQFVCGDRGFYFSRPASRVSRRSRGIVEECCFRSC DLALLETYCATPAKSERDVSTPPTVLPDNFPRYPVGKFFQYDTWKQSTQRLRRGLPALLRARRGHVLAKELEAFR EAKRHRPLIALPTQDPAHGGAPPEMASNRK

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3388/6881 FIGURE 3123

MTPGVVHASPPQSQRVPRQAPCEWAIRNIGQKPKEPNCHNCGTHIGLRSKTLRGTPNYLPIRQDTHPPSVIFCLA GVGVPGGTCRPAPCVPRFAALPWATNHPGPGCLSDLRA

 ${\tt MTPGVVHASPPQSQRVPRQAPCEWAIRNIGQKPKEPNCHNCGTHIGLRSKTLRGTPNYLPIRQDTHPPSVIFCLA}\\ {\tt GVGVPGGTCRPAPCVPRFAALPWATNHPGPGCLSDLRA}$

TGACCTTATTCCCCCAAAGAAGCGGCCTCCCGGGAAGGAGGGCGCCCTGGCGGAGAAGACTCGAACGGCTCCCACAG CCGAGCGGCGCTCCAAAACCCGTCCTCACAGCCTCGCCCCGTTCGCCTCAGCTACAACAAATCATCGTCAACCTG TTCCACCTTCTCCAGTCTGGTAGCAAAAAGGGGTGTCTCAGGCCACTCTTCACCTCCACCATGAGCCTGGACATC CAAGTGGTCAGGCTGGACGGCTGGGCCTCACGGAAGCACGGTGCAAGGACATCAGCTCTGCACTTCGAGTCAAC CCTGCACTGGCAGAGCTCAACCTGCGCAGCAACGAGCTGGGCGATGTCGGCGTGCATTGCGTGCTCCAGGGCCTG CAGACCCCCTCCTGCAAGATCCAGAAGCTGAGCCTCCAGAACTGCTGCCTGACGGGGGCCGGCTGCGGGGTCCTG TCCAGCACACTACGCACCCTGCCCCCCCGCAGGAGCTGCACCTCAGCGACAACCTCTTGGGGGATGCGGGCCTG CAGCTGCTCTGCGAAGGACTCCTGGACCCCCAGTGCCGCCTGGAAAAGCTGCAGCTGGAGTATTGCAGCCTCTCG GCTGCCAGCTGCGAGCCCCTGGCCTCCGTGCTCAGGGCCAAGCCGGACTTCAAGGAGCTCACGGTTAGCAACAAC GACATCAATGAGGCTGGCGTCCGTGTGCCAGGGCCTGAAGGACTCCCCCTGCCAGCTGGAGGCGCTCAAG CTGGAGAGCTGCGGTGTGACATCAGACAACTGCCGGGACCTGTGCGGCATTGTGGCCTCCAAGGCCTCGCTGCGG GAGCTGGCCCTGGGCAGCAACAAGCTGGGTGATGTGGGCATGGCGGAGCTGTGCCCAGGGCTGCTCCACCCCAGC TCCAGGCTCAGGACCCTGTGGATCTGGGAGTGTGGCATCACTGCCAAGGGCTGCGGGGATCTGTGCCGTGTCCTC AGGGCCAAGGAGACCTGAAGGAGCTCAGCCTGGCCGGCAACGAGCTGGGGGATGAGGGTGCCCGACTGCTGTT GAGACCCTGCTGGAACCTGGCTGCCAGCTGGAGTCGCTGTGGGTGAAGTCCTGCAGCTTCACAGCCGCCTGCTGC TCCCACTTCAGCTCAGTGCTGGCCCAGAACAGGTTTCTCCTGGAGCTACAGATAAGCAACAACAGGCTGGAGGAT GCGGGCGTGCGGGAGCTGTGCCAGGGCCTGGGCCAGCCTGGCTCTGTGCTGCGGGTGCTCTGGTTGGCCGACTGC GATGTGAGTGACAGCAGCTGCAGCAGCCTCGCCGCAACCCTGTTGGCCAACCAGCCTGCGTGAGCTGGACCTC AGCAACAACTGCCTGGGGGACGCCGGCATCCTGCAGCTGGTGGAGAGCGTCCGGCAGCCGGGCTGCCTCCTGGAG CAGCTGGTCCTGTACGACATTTACTGGTCTGAGGAGATGGAGGACCGGCTGCAGGCCCTGGAGAAGGACAAGCCA ${\tt TCCCTGAGGGTCATCTCCTGAGGCTCTTCCTGCTGCTGCTCCCTGGACGACCGGCCTCGAGGCAACCCTGGGG}$ CCCACCAGCCCTGCCATGCTCTCACCCTGCATATCCTAGGTTTGAAGAAAACGCTCAGATCCGCTTATTTCTG CCAGTATATTTTGGACACTTTATAATCATTAAAGCACTTTCTTGGC

MSLDIQSEDIQCEELSDARWAELLPLLQQCQVVRLDDCGLTEARCKDISSALRVNPALAELNLRSNELGDVGVHC VLQGLQTPSCKIQKLSLQNCCLTGAGCGVLSSTLRTLPTLQELHLSDNLLGDAGLQLLCEGLLDPQCRLEKLQLE YCSLSAASCEPLASVLRAKPDFKELTVSNNDINEAGVRVLCQGLKDSPCQLEALKLESCGVTSDNCRDLCGIVAS KASLRELALGSNKLGDVGMAELCPGLLHPSSRLRTLWIWECGITAKGCGDLCRVLRAKESLKELSLAGNELGDEG ARLLCETLLEPGCQLESLWVKSCSFTAACCSHFSSVLAQNRFLLELQISNNRLEDAGVRELCQGLGQPGSVLRVL WLADCDVSDSSCSSLAATLLANHSLRELDLSNNCLGDAGILQLVESVRQPGCLLEQLVLYDIYWSEEMEDRLQAL EKDKPSLRVIS

CACCCCACCCACCCTCCCCGCATTGTGGCATCAGTGCTGCTGCTTCCAGGGAGCCTTCCTGGCCATCCAAGCCT CCTCTCCAGGTTCCTGCCCTGCTGTAGTCCCCAGGCCAGTGCTTGGCAGGTGCTCAGGGAATGTATCCACCAACC AAGGTTTGGGGTGGCTGTCTCTGCCTGACCACTTTCCCCAGGCCCCTGGCGGGTACCTGAGCTGTGCTCTCAGGG CCTCAGGAACCTCCTTCCATATTCAGGGCCTGTGCCTGGGGAGGCTTCAGGGTGTAGCAGCTGTGCCCATCCCAG GCTGACCCACCCAGCTTGCCTGGTAGCCCAGCCTCTGGGCTAGTGTGCCGTGGGGCAGGGGATGTGCTGTAGCCT GGTGCAGAGTCCCCAACCCCAGAAGGGGGCCATGGAAGCTGACACCCCAAGTGGCCGCCCCCTGCTCTGTCTTG AGGCTCACAGACCACCCCACCCTACCCTGTCCTTGCCCAAGCAAATGAGAGGCAGGGGCTTCCCGGGCTGCTGCT GTCCCGCCCTCTGTGGGGCAGGAGGAGGTGCCCACAGAGGCTGGGTGATAGCCAGGAGATGGGCTGGCATCT GCATTACCCAAGCTCTGCTGCCCATGGTGGCCTTTCTGGGGGTGGTGATGGTCCCTGCCCCCTGCCCCACCCGT GATGTCTGCTCCAGAGACAAAGGTGGGGAGGGTGCTGAAGAGGAAGTGTTTGCCCAGGGAGAGGCTGCGGCTCCT CCTGAAACATCAGCCCTGTGGGTCCTGTTTGCAGAATCTCCGGCCTGTGAAACTGTGAGGGGGATTCGGCCAAGAC GTCCTCTTCCCTCTGCCTCCCACCCAGGCCACTCTTCACCTCCACCATGAGCCTGGACATCCAGAGCCTGGACAT GCTCTGGAACGCCTTGTTTGTGGACATGAAGTATGAATTCTGTGCAGCTACCACGTGCATGAGATGTGATTCTTG TGTTTCTTTTTGACAATTTAGGAATGTAAAACCCATTCCAGGCTCATGCAGCATGGGCTGAGGTGGGCCGGA GGTGGGCGGCCACTGGCCAGTGGGTCTCTGGCTCCGGTGTCTCAGCTCCTCTCCCTTCGCAGACACGAGGGC AGGACACAGCTTGGGTCCCCTCCGTGAGCCTCCATGGGGGCCTGCTTGTCCCTGCCAAGCTGGGGGCTGGGAGTC CTCTTTTTACCTGGTGATTTCAAGTAGTGTCAGGTTTGCGGAGGAGTTACGAGGACCGGACGGGCCTCCCTGGTG TTTTCGTCTTCCTCACTGGTCCAGGATTGCGTGGCCCTCAGCCCTCTGTCTCCTTAGCCCTCTCCCGTCTGTGAC TGTCCCCTCGTCTCTCTGGGGTTCTTGGTGGTCTGAGGGTCTGGCCAGGCTCCTGCAGGACGTCCTCTGTTGGGGC TTGTCTGGTGGTTTCTTGTGGTTGAAGTCCTACAGTTTTGGCAGGAATGCAGGAGATGCCGTGGGGCCTGCCAG GAGCGTCCTGTCACAGGCGCCGTCTGCCACCCTCTCCACTGTGACGCCACTGCCTTTCCTCCTGTGACTGATCAG TGCCTTCGAGAGATACTTTAAATTCTTTTTATTTTTAGAGACAGGGCATTGCTCTGTCACCCAGGCTGGAGTGGC TCCCTCATGGCTTATGCGGCCTCAACCTCCTGGGCTCAAGTGATCCTCCTGCCTCAGCCTCCCGAGTAGCTGGGA TTATGGGCATGCGCCACCACGCCCGGCTACTTTTGTATTTTTAGTAAAGACGGGGTTTCTCCATGTTGGTCAGGT TGGTCTTGAACTCCCGACCTCAGGTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCA CCGCGCCTGGCC

 ${\tt MSLDIQSLHIQCDDLTDARWAELLLLLHNCQVDRLDDCGLTEARCKDISSALRVNPALAELNLRSNELGDVGVHC} $$VLQGLQTPSCKIQKLSLQNCCLTGAGCGVLSSTLRTLPTLQELHLSDNLLGDAGLQLLCEGLLDPQCRLEKLQLE YCSLSAASCEPLASVLRAKPDFKELTVSNNDINEAGVRVLCQGLKDSPCQLEALKLESCGVTSDNCRDLCGIVAS KASLRELALGSNKLACTTFTGLRRWRTGCRPWRRTSHP$

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3396/6881 FIGURE 3131A

AGAGTGAAGCCACCACTCGCTCTCGAATCGCGCGGACGCTGGGCCTGCGCAGGCCTGTTCACAGCAGCTGCATCC CGTCAGTGTTGAAGCCAGTGGAGCCCTCTTTGGGGCTGCTGAGAGCGGATATTGGAGCTGCCTCTCTGTCTCTGT TTGGAGATCCTTATGAGCTGGATCCCTTCGACAGCAGTGAAGAGCTTTCTGCAAACCCTCTTTCCCCTCTGAGTG $\tt CCAAGAGACGGCTCTGTCCCGGTCAGCCCTGCAGTCCCACCAGCCCGTGGCCCAGGCCCGTCTCCGTGGGGCTTT$ CCAGGAGGCGCCTCCCTGCCGCGGTGCCAGAGCCAGACTTGGAGGAGGAGCCAGTGCCTGACCTGCTGGGCAGCA TCCTGTCGGGCCAGAGCCTCCTGATGCTGGGCAGCAGTGATGTCATCATCACCGCGACGGCTCCCTCAGCGCCA AGAGGGCGGCTCCAGTTTCTTTTCAGCGAAACTCAGGCAGTCTGTCCAGAGGGGAAGAAGGATTCAAGGGCTGCC TGCAGCCCCGAGCACTGCCCTCCGGGAGCCCGGCCCAAGGCCCGTCAGGAAACAGGCCACAGAGCACAGGGCTCA GCTGTCAAGGCAGGTCCCGCACCCCCCCCCCCCCGCACCGGGGGGCGCCTGTGAGGCTGGACTTGCCAGCAGCCCCTG GCACCAACAAGCACACCTTGCCCTTGCCTCTGCCGCGTCTAAGATCTCAAGCAGAGATTCTAAGCCCCCATGTC GCAGTGTGGTGCCGGGGCCTCCCCTGAAGCCAGCGCCCCAGAAGAACAGACATCTCTGAGCTACCCAGGATACCAA AGATCAGGAGAGATGACGGTGGTGGCAGACGGGATGCGGCCCCGGCCCACGGGCAGAGCATTGAGATCCCCAGTG CCTGCATCAGCCGACTGACTGCAGGGAGGGCACCGGGCAGCCAGGGCACACGGGCAGAGACACGGCCAGAGACACGAGAGACCCA GCAGCAGGGTGCCCCGGGAGCCCGGGGTGCACACGGGCAGCTCCCGGCCCCCAGCCCCCAGCTCCCATGGCAGTT ACATGCCACATTCCAGCCAGCTCTCCAGCCCTGGCTTCTGTAACACGTTCCGGCCTGTGGACGATAAGGAGCAGA GGAAGGAGAACCCCTCACCCCTCTTCTCCATCAAGAAGACGAGCAGCTGCGGAGCGAGGTCTACGACCCATCCG ACCCCACCGCCTCCACCCCCCTGGCAGCACCCCGAGAGGTCTGGCCCCGGCCTCCTGCCCTCTGAGA TCACACGAACCATCTCCATCAACAGCCCGAAGGCCCAGACGGTGCAGGCTGTGCGCTGCGTCACCTCCTACACGG TGGAGAGCATCTTTGGTACAGAGCCCGAACCCCTCTCGGACCGTCCTCCGCCATGTCCAAGCTCCGGGGTGCAG TGGCTGCCGAGGGGGCCTCTGACACGGAGCGAGAGGAGCCCACAGAGAGCCCAGGGCCTGCCCGGCTGCGGA GGCCATCCCCCCAGAGCCCTGGGATGAGGAGGATGGGGCGTCTTGCAGCACCTTCTTTGGCTCTGAGGAGCGGA TCGTGGAGCTCAGGCCCCTTCCCGGTCCCGCTCCACATCCAGCTCCCGCAGCAGGAAGAAGGCCCAAGAGGAAGA GGGTGTCCAGGGAGCACGGACGCGCTCTGGGACGCGCTCTGAATCCAGGGACAGGAGCTCGAGGTCAGCGT CACCATCAGTGGGTGAGGAGCGCCCCAGGAGGCAGCGGTCCAAGGCCAAGAGCCGGCGGTCCTCCAGTGACCGCT CCAGCAGCCGAGAGCGAGCTAAGAGGAAGAAGCCAAGGACAAGAGCAGGGAGCACAGGCGGGGCCCCTGGGGCC ACAGCCGGAGGACGTCCCGGTCGCGGTCGGGGAGCCCTGGCAGCTCTTCCTATGAGCACTATGAGAGTAGGAAGA AGAAGAAAAGGAGATCAGCGTCCAGACCTCGGGGAAGGGAGTGCTCCCCCACCAGCAGCCTGGAGAGGCTCTGCA GGAAGCGGAGGTCCCGAGCTCGGAGCACAGGGCACGGGAGCACAGGCGGCCTCGGTCCCGTGAGAAGT GGGAGCCAGGGCGGGAAGACCTCCCCACCAGGTTGCCAGCCTTGGGGGAAGCACATGTCTCGCCGGAGGTGGCTA CGGCCGACAAGGCCCCCTGCAGGCTCCCCTGTCCTGGAGGTGGCAGCTGAGTGTGAGCCGGACGACCTGGACC TGGATTATGGCGACTCCGTGGAGGCCGGACACGTCTTTGATGATTTCTCAAGCGACGCCGTTTTCATCCAGCTCG ATGACATGAGCTCGCCACCTTCTCCCGAAAGCACAGACTCTTCCCCGGAGCGAGACTTCCCACTGAAGCCTGCGT CCCCACCCTGCCAGAGGCACCCAGGAGCCACATTTGCTCAGGCCGGACGCGGCTGAGAAGGCTGAGGCACCCA GTTCCCCGGATGTGGCGCCTGCGGGGAAGGAAGACAGCCCCTCTGCGAGTGGGAGGGTACAGGAGGCAGCCCGGC CTGAGGAGGTGGTTTCGCAGACCCCCTGCTGCGGTCCAGAGCCCTGGTGAAGCGGGTCACCTGGAACCTGCAGG TGCTTCCGGAACCCGGGTTCCCAGACACAGACCCCTCTCAGGTTTACAGCCCCGGCCTGCCCCGGCCC AGCCCTCAAGCATCCCACCCTGCGCACTGGTCAGCCCACGCCCACGGTCCAGTTCATCCTTCAGGGGAGCCTGCCGC AAGCCACTGCAGCCAGCAACTCGGAGGAGAAGACCCCGGCCCCCAGGCTAGCTGCGGAGAAAACCAAGAAGGAGG AGTACATGAAGAAGCTGCACATGCAGGAGCGTGCTGTGGAGGAGGTGAAGCTGGCCATCAAGCCCTTCTACCAGA

3397/6881 FIGURE 3131B

 ${\tt MDDDSLDELVARSPGPDGHPQVGPADPAGDFEESSVGSSGDSGDDSDSEHGDGTDGEDEGASEEEDLEDRSGSED}$ ${\tt SEDDGETLLEVAGTQGKLEAAGSFNSDDDAESCPICLNAFRDQAVGTPENCAHYFCLDCIVEWSKNANSCPVDRT}$ LFKCICIRAQFGGKILRKIPVENTKASEEEEDPTFCEVCGRSDREDRLLLCDGCDAGYHMECLDPPLQEVPVDEW FCPECAAPGVVLAADAGPVSEEEVSLLLADVVPTTSRLRPRAGRTRAIARTRQSERVRATVNRNRISTARRVQHT PGRLGSSLLDEAIEAVATGLSTAVYQRPLTPRTPARRKRKTRRRKKVPGRKKTPSGPSAKSKSSATRSKKRQHRV KKRRGKKVKSEATTRSRIARTLGLRRPVHSSCIPSVLKPVEPSLGLLRADIGAASLSLFGDPYELDPFDSSEELS ANPLSPLSAKRRALSRSALQSHQPVARPVSVGLSRRRLPAAVPEPDLEEEPVPDLLGSILSGQSLLMLGSSDVII HRDGSLSAKRAAPVSFQRNSGSLSRGEEGFKGCLQPRALPSGSPAQGPSGNRPQSTGLSCQGRSRTPARTAGAPV RLDLPAAPGAVQARNLSNGSVPGFRQSHSPWFNGTNKHTLPLASAASKISSRDSKPPCRSVVPGPPLKPAPRRTD ISELPRIPKIRRDDGGGRRDAAPAHGQSIEIPSACISRLTGREGTGQPGRGTRAESEASSRVPREPGVHTGSSRP PAPSSHGSLAPLGPSRGKGVGSTFESFRINIPGNMAHSSQLSSPGFCNTFRPVDDKEQRKENPSPLFSIKKTKQL RSEVYDPSDPTGSDSSAPGSSPERSGPGLLPSEITRTISIKQPEGPDGAGCALRHAPTLVESIFGTEPEPPLGPS SAMSKLRGAVAAEGASDTEREEPTESQGLAARLRRPSPPEPWDEEDGASCSTFFGSEERTVTCVTVVEPEAPPSP DVLQAATHRVVELRPPSRSRSTSSSRSRKKAKRKVSREHGRTRSGTRSESRDRSSRSASPSVGEERPRRQRSKA KSRRSSSDRSSSRERAKRKKAKDKSREHRRGPWGHSRRTSRSRSGSPGSSSYEHYESRKKKKRRSASRPRGRECS PTSSLERLCRHKHQRERSHERPDRKESVAWPRDRRKRRSRSPSSEHRAREHRRPRSREKWPQTRSHSPERKGAVR EASPAPLAQGEPGREDLPTRLPALGEAHVSPEVATADKAPLQAPPVLEVAAECEPDDLDLDYGDSVEAGHVFDDF ${\tt SSDAVFIQLDDMSSPPSPESTDSSPERDFPLKPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLLRPALPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPEGTQEPHLPPASLAVAAIQREVSLMHDEDPSQPPPLPPASLAVAAIQREVSLMHDEDPSQPPPASLAVAAIQREVSLMHDEDPSQPPPASLAVAAIQREVSLMHDEDPSQPPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPPASLAVAAIQREVSLMHDEDPSQPASLAVAAIQREVSLMHDEDPSQPASLAVAAIQREVSLMHDEDPSQPASLAVAAIQREVSLMHDEDPSQPASLAVAAIQREVSLMHDEDPSQPASLAVAAIQREVSLMHDEDPSQPASLAVAAIQREVSLMHDEDPSQPASLAVAIQREVSLMHDEDPSQPASLAVAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPASAIQREVSLMHDEDPSQPA$ DAAEKAEAPSSPDVAPAGKEDSPSASGRVQEAARPEEVVSQTPLLRSRALVKRVTWNLQESESSAPAEDRAPRAP $\verb|LHRPQKPREGAWDMEDVAPTGVRQAFSELPFPSHVLPEPGFPDTDPSQVYSPGLPPAPAQPSSIPPCALVSQPTV|$ QFILQGSLPLVGCGAAQTLAPVPAALTPASEPASQATAASNSEEKTPAPRLAAEKTKKEEYMKKLHMQERAVEEV KLAIKPFYQKREVTKEEYKDILRKAVQKICHSKSGEINPVKVANLVKAYVNKYRHMRRHKKPEAGEEPPTQGAEG WO 2004/030615 PCT/US2003/028547

3399/6881 FIGURE 3133

GGCACGAGGAAGCGCACGGCCTCGGCGACCCTCTCCGACCCGCCGCCGCCGCCGCCATCCAGCCCTCCAGCCTTCTG CGCCGGACCATGTCGGAGGTTGGGGGCTCTGTGGAGGACCTGATTGCCAAAGGCCCCGTCTCAAAGTACTCCCAG GCGGTGCCAGCCGTGACCGAGGGGCCCATTCCCGAGGTGCTCAAGAACTACATGGACGCCCAGTACTACGGGGAG ATTGGCATCGGGACGCCCCCCAGTGCTTCACAGTCGTCTTCGACACGGGCTCCTCCAACCTGTGGGTCCCCTCC ATCCACTGCAAACTGCTGGACATCGCTTGCTGGATCCACCACAAGTACAACAGCGACAAGTCCAGCACCTACGTG AAGAATGGTACCTCGTTTGACATCCACTATGGCTCGGGCAGCCTCTCCGGGTACCTGAGCCAGGACACTGTGTCG GTGCCCTGCCAGTCAGCGTCGTCAGCCTCTGCCCTGGGCGGTGTCAAAGTGGAGAGGCAGGTCTTTGGGGAGGCC ACCAAGCAGCCAGGCATCACCTTCATCGCAGCCAAGTTCGATGGCATCCTGGGCATGGCCTACCCCCGCATCTCC GTCAACACGTGCTGCCCGTCTTCGACAACCTGATGCAGCAGAAGCTGGTGGACCAGAACATCTTCTCCTTCTAC CTGAGCAGGGACCCAGATGCGCAGCCTGGGGGTGAGCTGATGCTGGGTGGCACAGACTCCAAGTATTACAAGGGT TCTCTGTCCTACCTGAATGTCACCCGCAAGGCCTACTGGCAGGTCCACCTGGACCAGGTGGAGGTGGCCAGCGGG CTGACCCTGTGCAAGGAGGGCTGTGAGGCCATTGTGGACACAGGCACTTCCCTCATGGTGGGCCCGGTGGATGAG GTGCGCGAGCTGCAGAAGGCCATCGGGGCCGTGCCGCTGATTCAGGGCGAGTACATGATCCCCTGTGAGAAGGTG TCCACCCTGCCCGCGATCACACTGAAGCTGGGAGGCAAAGGCTACAAGCTGTCCCCAGAGGACTACACGCTCAAG GTGTCGCAGGCCGGGAAGACCCTCTGCCTGAGCGGCTTCATGGGCATGGACATCCCGCCACCCAGCGGGCCACTC TGGATCCTGGGCGACGTCTTCATCGGCCGCTACTACACTGTGTTTGACCGTGACAACAACAGGGTGGGCTTCGCC $\tt CCCTGGCCCAGCGGCCCCTCCCACACACCCACACTCGCCGCCCACTGTCCTGGGCGCCCTGGAAGCCGGC$ GCTTGGCAGCCGAGCTCGTGTATCCTGGGGCTCCCTTCATCTCCAGGGAGTCCCCTCCCCGGCCCTACCAGCGCC CCCTCTGCCCAGCTTGGGCCCAGCTGGGCTCTGCCACCCTACCTGTTCAGTGTCCCGGGCCCGTTGAGGATGAGG CCGCTAGAGGCCTGAGGATGAGCTGGAAGGAGTGAGAGGGGACAAAACCCACCTTGTTGGAGCCTGCAGGGTGGT GCTGGGACTGAGCCAGTCCCAGGGGCATGTATTGGCCTGGAGGTGGGGTTGGGATTGGGGGCTGGTGCCAGCCTT CCTCTGCAGCTGACCTCTGTTGTCCTCCCCTTGGGCGGCTGAGAGCCCCAGCTGACATGGAAATACAGTTGTTGG

MQPSSLLPLALCLIAAPASALVRIPLHKFTSIRRTMSEVGGSVEDLIAKGPVSKYSQAVPAVTEGPIPEVLKNYM DAQYYGEIGIGTPPQCFTVVFDTGSSNLWVPSIHCKLLDIACWIHHKYNSDKSSTYVKNGTSFDIHYGSGSLSGY LSQDTVSVPCQSASSASALGGVKVERQVFGEATKQPGITFIAAKFDGILGMAYPRISVNNVLPVFDNLMQQKLVD QNIFSFYLSRDPDAQPGGELMLGGTDSKYYKGSLSYLNVTRKAYWQVHLDQVEVASGLTLCKEGCEAIVDTGTSL MVGPVDEVRELQKAIGAVPLIQGEYMIPCEKVSTLPAITLKLGGKGYKLSPEDYTLKVSQAGKTLCLSGFMGMDI PPPSGPLWILGDVFIGRYYTVFDRDNNRVGFAEAARL

TGGAGGCGTGATCCTGGGTGTGGCCCTGTGGCTCCGCCATGACCCGCAGACCACCAACCTCCTGTATCTGGAGCT GGGAGACAAGCCCGCGCCCAACACCTTCTATGTAGGCATCTACATCCTCATCGCTGTGGGCGCTGTCATGATGTT CATCCTGTTTGCCTGTGAGGTGGCCGCCGGCATCTGGGGGCTTTGTCAACAAGGACCAGATCGCCAAGGATGTGAA GCAGTTCTATGACCAGGCCCTACAGCAGGCCGTGGTGGATGATGACGCCAACAACGCCAAGGCTGTGGTGAAGAC GTGTCCCTCGGGCAGCAACATCATCAGCAACCTCTTCAAGGAGGACTGCCACCAGAAGATCGATGACCTCTTCTC CGGGAAGCTGTACCTCATCGGCATTGCTGCCATCGTGGTCGCTGTGATCATGATCTTCGAGATGATCCTGAGCAT GGTGCTGTGCTGTGGCATCCGGAACAGCTCCGTGTACTGAGGCCCCGCAGCTCTGGCCACAGGGACCTCTGCAGT GCCCCCTAAGTGACCCGGACACTTCCGAGGGGGCCATCACCGCCTGTGTATATAACGTTTCCGGTATTACTCTGC TACACGTAGCCTTTTTACTTTTGGGGTTTTGTTTTTGTTCTGAACTTTCCTGTTACCTTTTCAGGGCTGACGTCA CATGTAGGTGGCGTGTATGAGTGGAGACGGGCCTGGGTCTTGGGGGACTGGAGGGCAGGGGTCCTTCTGCCCTGGG GTCCCAGGGTGCTCTGCCTCAGCCAGGCCTCTCCTGGGAGCCACTCGCCCAGAGACTCAGCTTGGCCAACTT GGGGGGCTGTGTCCACCCAGCCCGCCCGTCCTGTGGGCTGCACAGCTCACCTTGTTCCCTCCTGCCCCGGTTCGA GAGCCGAGTCTGTGGGCACTCTCTGCCTTCATGCACCTGTCCTTTCTAACACGTCGCCTTCAACTGTAATCACAA CATCCTGACTCCGTCATTTAATAAAGAAGGAACATCAGGCATGCT

CTTGCTCGCGGAGAGAGGAGCTAGGAGCCTCGGCCAATGGGAGCCGGCGTTGTTGGAGGCCACGGCGCGCAGCC CCAAAGCGAGCGAAGCTAGGGTCGCCGCCACTGCCGCAGGAGGCGTGAGGGGATAAAAACATTCAGATGGCAGAT CACAGTTTTTCAGATGGGGTTCCTTCAGATTCCGTGGAAGCTGCTAAAAATGCAAGTAACACAGAAAAGCTCACA GATCAGGTGATGCAGAATCCTCGAGTTCTGGCAGCTTTACAGGAGCGACTTGACAATGTCCCTCACACCCCTTCC **AGCTACATCGAAACTTTACCTAAAGCAGTAAAAAGAAGAATTAATGCATTGAAACAACTTCAGGTGAGATGTGCT** GACAAGAGAAGAATTTATCACCGGCGATGTTGAACCAACAGATGCGGAATCGGAATGGCACAGTGAAAATGAA GAGGAAGAAATTGGCTGGAGACATGAAAAGTAAAGTAGTCGTCACAGAAAAAGCAGCGGCAACGGCTGAAGAG CCAGATCCCAAAGGAATTCCAGAGTTCTGGTTTACCATCTTCAGAAATGTGGACATGCTGAGTGAATTAGTCCAG GAATATGATGAACCAATCTTGAAACACCTGCAGGATATTAAAGTGAAATTTTCTGACCCTGGACAGCCTATGTCT TTTGTGTTAGAGTTCCACTTTGAACCCAACGACTACTTTACCAACTCAGTCCTGACAAAAACCTACAAGATGAAA TCAGAACCAGATAAGGCTGATCCCTTTTCCTTTGAAGGTCCTGAGATTGTGGACTGTGACGGGTGTACTATTGAC TGGAAGAAGGAAGGAAGGATGTTACTGTCAAAACCATCAAGAAAAAGCAGAAGCATAAGGGTCGAGGCACTGTTAGA ACAATTACGAAACAAGTACCCAATGAGTCCTTTTTCAACTTCTTCAATCCATTGAAAGCATCCGGGGATGGAGAA ${\tt TCACTGGATGAAGATTCTGAATTCACATTAGCCTCTGATTTTGAAATTGGACACTTTTTCCGTGAGCGGATAGTC}$ GAGGAGGAATTAGAAGGTGACGAGGAGGAGAAGACGAGGATGATGCGGAAATTAACCCCAAGGTGTAATTTTTG TCTGTTAATCATTCATACGTTTCTAGAAGGAACCCAGCCGGCGGAATGCAAGCAGCAGTAGGAAGCGGAGG CGGGTGCCTGGCAGACCGGCTGTCGGGACTCCAGGCCTGTGGGCGGGGCCTCGGTCCTTGCCGCAGCACAATCCC GTGGACAGAGCTTACTCCATCTAACTCGTTTTCAAGTGCATGATTTTCACTTTCACTTTTCCTTATTA TTTTGCTTAACTTGTACAGTGGCAACTGAAATGCATTTCAGAAATAGGAGGTTTCGTCCAGCACCCTCTGCAGCC TTGGTGCCTGTAGCTCTGGACTTCCCTGGGCCTTTCCCTGTGGGAGGGCCCTGTAGACCACATCAGGGTGGGGTG GGGGTCACTTGGCAAAAAGGGCCGAGGTCTGGTGATGTGGTTCCCAGGATCTGGAACCTCTCCCACCCCTCCTGC AGTTGGACTGAATTCTTCCCTTTCATCCGAAGAAACCCACTTGCTGTTTCCAGCCGCTGAATCTGCTGAGTGTGC AGCCTGCATCACCTGCTGTATGCCGATCATCTCAGAAAGGGCTGTGTAGAGTAGGGCCCTGTTCTCCTTAGGATG TTGCTTCTTCATTTTTTTTTTTTTTTAGGGGTGGGTCAGGGTTGTGACACCACCCAGGCCAGGTGAGAGCTGCTGCG GGTCACCTCATATTTATCTATCCCTTCTTGCCTGTGAGGACTGCGGCTTTTCGCTGTGGCTCGTCCTTAACGTTT CTGAACCACCTTGGTGCCCTGAGCAGGAAGATGTGCCACTTCCTAGCAGGCGCAAGGCCTGTGCGGAAGAAACGC CGCTCCCTGCCACCAGGGCTGAAGATGCGAGCCCGTCCTCATGACGCAGGCGCCACCCTGCTGCCGGAGCCGGGC TTCGGCAGTCTTCTCCACTGAGGGACTGGGCTGGGAAGTCCTGCGTTTCAGTGGAGCGTATGAGCGTCAAGTCCT GCTTTCTCAGTAGCCCCATTGCGGGGCCCCACCATTCATCCTGTCTGAAGGTCCTGGGTTTGGTGTGACCGCTTG GCGGCTGGTGGGTGGGGTTTTCAAGTGGGTGACGGCGCTCTCCGGCAGCCGGGGATGGCCGTGTCCGCACTGACC AGGCCTGTGGAGAGTGCTCGGCCTAACCTTAGAACACATTTGTAACTGAATACAGTGTTTTCAATTTGTACAGAA TAGTTAGAATATTCTATTAAAGTGGTGAAACATTG

CCGGGGCGGCTGCATCAGATTCTAGGAAGTGTCTGTAGCCGCAGCTGCGGGTCCGGGATTCCCAGCCATCGC AGATTCCTCCGGGCAGCAGGGCAAAGGCCGGCGTGTGCAGCCCCAGTGGTCCCCTCCTGCTGGGACCCAGCCATG CAGACTCCACCTTTACAACAGCCTCACCAGGAACAAGGAAGTGTTCATACCTCAAGATGGGAAAAAGGTGACGTG GTATTGCTGTGGGCCAACCGTCTATGACGCATCTCACATGGGGCACGCCAGGTCCTACATCTCTTTTGATATCTT GAGAAGAGTGTTGAAGGATTACTTCAAATTTGATGTCTTTTATTGCATGAACATTACGGATATTGATGACAAGAT CATCAAGAGGGCCCGGCAGAACCACCTGTTCGAGCAGTATCGGGAGAAGAGGCCTGAAGCGGCACAGCTCTTGGA GGATGTTCAGGCCGCCTGAAGCCATTTTCAGTAAAATTAAATGAGACCACGGATCCCGATAAAAAAGCAGATGCT CGAACGGATTCAGCACGCAGTGCAGCTTGCCACAGAGCCACTTGAGAAAGCTGTGCAGTCCAGACTCACGGGAGA TGGCTGTGATGTCACTGACAATTCCATCTTCTCCAAGCTGCCCAAGTTCTGGGAGGGGGACTTCCACAGAGACAT GGAAGCTCTGAATGTTCTCCCTCCAGATGTCTTAACCCGGGTTAGTGAGTATGTGCCAGAAATTGTGAACTTTGT TAGCGAGAAGCACTCCTATGGGAAGCTGGTGCCTGAGGCCGTTGGAGATCAGAAAGCCCTTCAAGAAGGGGAAGG TGACCTGAGCATCTCTGCAGACCGCCTGAGTGAGAAGCGCTCTCCCAACGACTTTGCCTTATGGAAGGCCTCTAA ${\tt GCCCGGAGAACCGTCCTGGCCGTGCCCTTGGGGAAAGGGTCGTCCGGGCTGGCATATCGAGTGCTCGGCCATGGC}$ AGGCACCCTCCTAGGGGCTTCGATGGACATTCACGGAGGTGGGTTCGACCTCCGGTTCCCCCACCATGACAATGA GCTGGCACAGTCGGAGGCCTACTTTGAAAACGACTGCTGGGTCAGGTACTTCCTGCACACAGGCCACCTGACCAT TGCAGGCTGCAAAATGTCAAAGTCACTAAAAAACTTCATCACCATTAAAGATGCCTTGAAAAAAGCACTCAGCACG GCAGTTGCGGCTGGCCTTCCTCATGCACTCGTGGAAGGACACCCTGGACTACTCCAGCAACACCATGGAGTCAGC GCTTCAATATGAGAAGTTCTTGAATGAGTTTTTCTTAAATGTGAAAGATATCCTTCGCGCTCCTGTTGACATCAC TGGTCAGTTTGAGAAGTGGGGAGAAGAAGAAGCAGAACTGAATAAGAACTTTTATGACAAGAAGACAGCAATTCA CCATATGCTGAAGATCTTTGGGGCCGTAGAAGAGGACAGCTCCCTGGGATTCCCGGTCGGAGGGCCTGGAACCAG $\tt CCTCAGTCTCGAGGCCACAGTCATGCCCTACCTTCAGGTGTTATCAGAATTCCGAGAAGGAGTGCGGAAGATTGC$ AGCAAAGCTGGCCAAGATGAAGATTCCCCCCAGTGAGATGTTCTTGTCAGAAACCGACAAATACTCCAAGTTTGA CTTCGAGGCTCAGGAGAGCTCTACAAGGAATATCTGCAGATGGCCCAGAATGGAAGCTTCCAG**TGA**GGGGGCAC AGGACTGACTTTTTAAACCATTGTGGACTAGTGGCTGCTGTCTGCCTCAGTGACAATGTCCCAGCGCTCCTATCA TGTTTACAGTCACCCTTGGGTCCTAAATTAAGAGTTGTGTTCATGTAGGTTCGTCGTCGTCGTTGGCTCTGAGACA

MADSSGQQGKGRRVQPQWSPPAGTQPCRLHLYNSLTRNKEVFIPQDGKKVTWYCCGPTVYDASHMGHARSYISFD ILRRVLKDYFKFDVFYCMNITDIDDKIIKRARQNHLFEQYREKRPEAAQLLEDVQAALKPFSVKLNETTDPDKKQ MLERIQHAVQLATEPLEKAVQSRLTGEEVNSCVEVLLEEAKDLLSDWLDSTLGCDVTDNSIFSKLPKFWEGDFHR DMEALNVLPPDVLTRVSEYVPEIVNFVQKIVDNGYGYVSNGSVYFDTAKFASSEKHSYGKLVPEAVGDQKALQEG EGDLSISADRLSEKRSPNDFALWKASKPGEPSWPCPWGKGRPGWHIECSAMAGTLLGASMDIHGGGFDLRFPHHD NELAQSEAYFENDCWVRYFLHTGHLTIAGCKMSKSLKNFITIKDALKKHSARQLRLAFLMHSWKDTLDYSSNTME SALQYEKFLNEFFLNVKDILRAPVDITGQFEKWGEEEAELNKNFYDKKTAIHKALCDNVDTRTVMEEMRALVSQC NLYMAARKAVRKRPNQALLENIALYLTHMLKIFGAVEEDSSLGFPVGGPGTSLSLEATVMPYLQVLSEFREGVRK IAREQKVPEILQLSDALRDNILPELGVRFEDHEGLPTVVKLVDRNTLLKEREEKRRVEEEKRKKKEEAARRKQEQ EAAKLAKMKIPPSEMFLSETDKYSKFDENGLPTHDMEGKELSKGQAKKLKKLFEAQEKLYKEYLQMAQNGSFQ

MSIRVTQKSYEVSTSSPPGLQQPLLHEWTWCLHQLLKLFPSGTSSFRGSLGGGYDKVRFLEQHNKMLETKWSLLQ QQKTARSNMDNMFESYINNLRRQLDTLGQEKLKLGNMQGLMENCKNKYEDEINKCAELENEFVLIKKDVDEANMN KVELESLLEGLTDEINFLRQLYEEEIPELQSQISDTSVVLSMDSSRSLDMDNTIAEVKAQYKLHGYQELMKVKLA LDIEIATYRKLLDGEESRLDSFSHTSSTRAVVVKNIETHEGKLVSESSDVLPK

GGGAAGGGGATTTGGATTGTTGCGCCTCTGCTCTGAAGAAAGTGCTGTCTGGCTCCAACTCCAGTTCTTTCCCCT GAGCAGCGCCTGGAACCTAACCCTTCCCACTCTGTCACCTTCTCGATCCCGCCGGCGCTTTAGAGCCGCAGTCCA GTCTTGGATCCTTCAGAGCCTTAGCCACTAGCTGCGATGCATGTGATCAAGCGAGATGGCCGCCAAGAACGAGTC ATGTTTGACAAAATTACATCTCGAATCCAGAAGCTTTGTTATGGACTCAATATGGATTTTGTTGATCCTGCTCAG. ATCACCATGAAAGTAATCCAAGGCTTGTACAGTGGGGTCACCACAGTGGAACTAGATACTTTGGCTGCTGAAACA GCTGCAACCTTGACTACTAAGCACCCTGACTATGCTATCCTGGCAGCCAGGATCGCTGTCTCTAACTTGCACAAA GAAACAAAGAAAGTGTTCAGTGATGTGATGGAAGACCTCTATAACTACATAAATCCACATAATGGCAAACACTCT CCCATGGTGGCCAAGTCAACATTGGATATTGTTCTGGCCAATAAAGATCGCCTGAATTCTGCTATTATCTATGAC CGAGATTTCTCTTACAATTACTTCGGCTTTAAGACGCTAGAGCGGTCTTATTTGTTGAAGATCAATGGAAAAGTG GCTGAAAGACCACAACATATGTTGATGAGAGTATCTGTTGGGATCCACAAAGAAGACATTGATGCAGCAATTGAA ACATATAATCTTCTTTCTGAGAGGTGGTTTACTCATGCTTCGCCCACTCTCTTCAATGCTGGTACCAACCGCCCA CAACTTTCTAGCTGTTTTCTTCTGAGTATGAAAGATGACAGCATTGAAGGCATTTATGACACTCTAAAGCAATGT GCATTGATTTCTAAGTCTGCTGGAGGAATTGGTGTTGCTGTGAGTTGTATTCGGGCTACTGGCAGCTACATTGCT GGGACTAATGGCAATTCCAATGGCCTTGTACCGATGCTGAGAGTATATAACAACACAGCTCGATATGTGGATCAA GGTGGGAACAAGCGTCCTGGGGCATTTGCTATTTACCTGGAGCCTTGGCATTTAGACATCTTTGAATTCCTTGAT TTANAGAAGAACACAGGAAAGGAAGAGCAGCGTGCCAGAGATCTTTTCTTTGCTCTTTGGATTCCGGATCTCTTC ATGAAACGAGTGGAGACTAATCAGGACTGGTCTTTGATGTGTCCAAATGAGTGTCCTGGTCTGGATGAGGTTTGG GGAGAGGAATTTGAGAAACTATATGCAAGTTATGAGAAACAAGGTCGTGTCCGCAAAGTTGTAAAAGCTCAGCAG CTTTGGTATGCCATCATTGAGTCTCAGACGGAAACAGGCACCCCGTATATGCTCTACAAAGATTCCTGTAATCGA AAGAGCAACCAGCAGAACCTGGGAACCATCAAATGCAGCAACCTGTGCACAGAAATAGTGGAGTACACCAGCAAA AAGAAGTTGGCTGAAGTCACTAAAGTCGTTGTCCGAAACTTGAATAAAATTATTGATATAAACTACTATCCTGTA CCAGAGGCATGCCTATCAAATAAACGCCATCGCCCCATTGGAATTGGGGTACAAGGTCTGGCAGATGCTTTTATC GCTCTGGAAGCCAGCTGTGACCTTGCCAAGGAGCAGGGCCCCATACGAAACCTATGAGGGCTCTCCAGTTAGCAAA GGAATTCTTCAGTATGATATGTGGAATGTTACTCCTACAGACCTATGGGACTGGAAGGTTCTCAAGGAGAAGATT GCAAAGTATGGTATAAGAAACAGTTTACTTATTGCCCCGATGCCTACAGCTTCCACTGCTCAGATCCTGGGGAAT AATGAGTCCATTGAACCTTACACCAGCAACATCTATACTCGCAGAGTCTTGTCAGGAGAATTTCAGATTGTAAAT GGCTCTATTCAGAGCATACCAGAAATTCCTGATGACCTGAAGCAACTTTATAAAACTGTGTGGGAAATCTCTCAG AAAACTGTTCTCAAGATGGCAGCTGAGAGAGGTGCTTTCATTGATCAAAGCCAATCTTTGAACATCCACATTGCT GAGCCTAACTATGGCAAACTCACTAGTATGCACTTCTACGGCTGGAAGCAGGGTTTGAAGACTGGGATGTATTAT TTAAGGACAAGACCAGCGGCTAATCCAATCCAGTTCACTCTAAATAAGGAGAAGCTAAAAGATAAAGAAAAGGTA TCAAAAGAGGAAGAAGAAGAGGAGGAACACAGCAGCCATGGTGTGCTCTTTGGAGAATAGAGATGAATGTCTG ATGTGTGGATCCTGAGGAAAGACTTGGAAGAGACCAGCATGTCTTCAGTAGCCAAACTACTTCTTGAGCATAGAT AGGTATAGTGGGTTTGCTTGAGGTGGTAAGGCTTTGCTGGACCCTGTTGCAGGCAAAAGGAGTAATTGATTTAAA GTACTGTTAATGATAATGATTTTTTTTTTTAAACTCATATATTGGGATTTTCACCAAAATAATGCTTTTGAAA AAAAGAAAAAAAAACGGATATATTGAGAATCAAAGTAGAAGTTTTAGGAATGCAAAATAAGTCATCTTGCATAC AGGGAGTGGTTAAGTAAGGTTTCATCACCCCTTTAGCACTGCTTTTCTGAAGACTTCAGTTTTGTTAAGGAGATT TAGTTTTACTGCTTTGACTGGTGGGTCTCTAGAAGCAAAACTGAGTGATAACTCATGAGAAGTACTGATAGGACC TTTATCTGGATATGGTCCTATAGGTTATTCTGAAATAAAGATAAACATTTCTAAGTG

MGHFTEEDKATITSLWGKVNVEDAGGETLGRLLVVYPWTQRFFDSFGNLSSASAIMGNPKVKAHGKKVLTSLGDA IKHLDDLKGTFAQLSELHCDKLHVDPENFKLLGNVLVTVLAIHFGKEFTPEVQASWQKMVTAVASALSSRYH

 ${\tt MGHFTEEDKATITSLWGKVNVEDAGGETLGRLLVVYPWTQRFFDSFGNLSSASAIMGNPKVKAHGKKVLTSLGDAIKHLDDLKGTFAQLSELHCDKLHVDPENFKLLGNVLVTVLAIHFGKEFTPEVQASWQKMVTGVASALSSRYH}$

 ${\tt MVHFTAEEKAAVTSLWSKMNVEEAGGEALGRLLVVYPWTQRFFDSFGNLSSPSAILGNPKVKAHGKKVLTSFGDAIKNMDNLKPAFAKLSELHCDKLHVDPENFKLLGNVMVIILATHFGKEFTPEVQAAWQKLVSAVAIALAHKYH}$

CTCTTCTCCCCTGATTCAAGACTCCTCTGCTTTGGACTGAAGCACTGCAGGAGTTTGTGACCAAGAACTTCAAGA GTCAAGACAGAAGGAAGCCAAGGGAGCAGTGCAATGGATTTCTCAGTAAAGGTAGACATAGAGAAGGAGGTGACC TGCCCCATCTGCCTGGAGCTCCTGACAGAACCTCTGAGCCTAGATTGTGGCCACAGCTTCTGCCAAGCCTGCATC ACTGCAAAGATCAAGGAGTCAGTGATCATCTCAAGAGGGGAAAGCAGCTGTCCTGTGTGTCAGACCAGATTCCAG CCTGGGAACCTCCGACCTAATCGGCATCTGGCCAACATAGTTGAGAGAGTCAAAGAGGTCAAGATGAGCCCACAG GAGGGGCAGAAGAGAGATGTCTGTGAGCACCACGGAAAAAAACTCCAGATCTTCTGTAAGGAGGATGGAAAAGTC ATTTGCTGGGTTTGTGAACTGTCTCAGGAACACCAAGGTCACCAAACATTCCGCATAAACGAGGTGGTCAAGGAA TGTCAGGAAAAGCTGCAGGTAGCCCTGCAGAGGCTGATAAAGGAGAATCAAGAGGCTGAGAAGCTGGAAGATGAC ATCAGACAAGAGAACCGCCTGGAAGATCGAGAGACAGAAGATTCTGAAAGGGTTCAATGAAATGAGAGTCATC GCTACAGACCAGCTGGTCCAGCAGAGGCAGGATGCCAGCACGCTCATCTCAGATCTCCAGCGGAGGTTGACGGGA TCGTCAGTAGAGATGCTGCAGGATGTGATTGACGTCATGAAAAGGAGTGAAAGCTGGACATTGAAGAAGCCAAAA TCTGTTTCCAAGAAACTAAAGAGTGTATTCCGAGTACCAGATCTGAGTGGGATGCTGCAAGTTCTTAAAGAGCTG ACAGATGTCCAGTACTACTGGGTGGACGTGATGCTGAATCCAGGCAGTGCCACTTCGAATGTTGCTATTTCTGTG GATCAGAGACAAGTGAAAACTGTACGCACCTGCACATTTAAGAATTCAAATCCATGTGATTTTTCTGCTTTTGGT GTCTTCGGCTGCCAATATTTCTCTTCGGGGAAATATTACTGGGAAGTAGATGTCTGGAAAGATTGCCTGGATC CTGGGCGTACACAGTAAAATAAGTAGTCTGAATAAAAGGAAGAGCTCTGGGTTTGCTTTTGATCCAAGTGTAAAT TATTCAAAAGTTTACTCCAGATATAGACCTCAATATGGCTACTGGGTTATAGGATTACAGAATACATGTGAATAT AATGCTTTTGAGGACTCCTCCTCTTCTGATCCCAAGGTTTTGACTCTCTTTATGGCTGTGCTCCCTGTCGTATTG GGGTTTTCCTAGACTATGAGGCAGGCATTGTCTCATTTTTCAATGTCACAAACCACGGAGCACTCATCTACAAGT TCTCTGGATGTCGCTTTTCTCGACCTGCTTATCCGTATTTCAATCCTTGGAACTGCCTAGTCCCCATGACTGTGT GCCCACCGAGCTCCTGAGTGTTCTCATTCCTTTACCCACTTCTGCATAGTAGCCCTTGTGCTGAGACTCAGATTC CATTTGCTAGGGCTTCCATAGCAAGCATCATAGATTGCTGATTTAAACTGTAATTGTATTGCCGTACTGTGGGC CTCTCCTTGGCTTGTAGAAGGCATCTTGTCCCTATGACTCTTCACATTGTCTTTATGTACATCTCTGTGCCCAAG TTTTCCCTTTTATTAAGACACCAGTCATACTGGCTCAGGGCCCACCGCTAATGCCTTAATGAAATCATTTTAAC ATTATATTCTCTACAAAGACCTTATTTCCAAATAAGATAATATTTGGAGGTATTGGGAATAAAAACTCCAACATA TAAATTTGAGGAAGGCACGATTTCACTCATAACAATCTTACCCTTTCTTGCAAGAGATGCTTGTACATAATTTTC AAAGAGAAACTTGTCAACTCATATCCACGTTATCTAGCAAAGTACATAAGAATCTATCACTAAGTAATGTATCCT TCAGAATGTGTTGGTTTACCAGTGACACCCCATATTCATCACAAAATTAAAGCAAGAAGTCCATAGTAATTTATT TGCTAATAGTGGATTTTTAATGCTCAGAGTTTCTGAGGTCAAATTTTATCTTTTCACTTACAAGCTCTATGATCT TAAATAATTTACTTAATGTATTTTGGTGTATTTTCCTCAAATTAATATTGGTGTTCAAGACTATATCTAATTCCT CTTTTTGCTTCAATAAAACAATAGCTGGCTCT

GGCACGAGGCTGAGCGCTCCGACTTCCAGAGGAGCGCTGTGCACGTGGAGAAGAGCGGGGACTCGGCGACCCTGC $\texttt{CCTCCCGACCCTC} \underline{\textbf{ATC}} \texttt{TTCGAAGAGCCTGAGTGGGCCCGAGGGCGCCCCAGTAGCCGGGGCCTTGGGCCCGTAAT}$ $\tt CTCACGACCTCCGCCTGCGGCCTCCTCGCAAAACAAGGGCTCCAAGCGCCGCCAGCTCTTGGCCACATTACGGGC$ CCTAGAGGCAGCATCTCTTTCCCAGCATCCCCCAGCCTATGTATAAGTGACTCTGAGGAGGAGGAGGAAAAG GAAGAAGAAATGCCCCAAAAAGGCATCATTTGCCAGTGCCTCTGCTGAAGTAGGGAAGAAAGGGAAGAAAAATG TCAAAAACAGGGCCCACCTTGCAGTGACTCTGAGGAAGAAGTAGAAAGGAAGAAATGCCACAAACAGGCTCT TGTTGGCAGTGACTCTGCTGAAGATGAGAAAAGAAGGGAAATGCCAGAAACATGCCCCTATAAATTCAGCCCA GCACCTGGACAATGTTGACCAAACAGGTCCCAAAGCCTGGAAGGGTAGTACTACAAATGATCCACCAAAGCAAAG CCCTGGGTCCACTTCCCCTAAACCCCCTCATACATTAAGCCGCAAGCAGTGGCGGAACCGGCAAAAGAATAAGAG AAGATGTAAGAACAAGTTTCAGCCACCTCAGGTGCCAGACCAGGCCCCAGCTGAGGCCCCCACAGAGAAGACAGA GGTGTCTCCTGTTCCCAGGACAGACAGCCATGAGGCTCGGGCAGGGGCTTTGCGAGCCCGCATGGCACAGCGGCT GGATGGGGCCCGATTTCGCTACCTCAATGAACAGTTGTACTCAGGGCCCAGCAGTGCTGCACAGCGTCTCTTCCA GGAAGACCCTGAGGCTTTCTTCTCTACCACCGCGGCTTCCAGAGCCAAGTGAAGAAGTGGCCACTGCAGCCAGT GGACCGCATCGCCAGGGATCTTCGCCAGCGGCCTGCATCCCTAGTGGTGGCTGACTTCGGCTGTGGGGATTGCCG CTTGGCTTCAAGTATCCGGAACCCTGTGCATTGCTTTGACTTGGCTTCTCTGGACCCTAGGGTCACTGTGTGA CATGGCCCAGGTTCCTCTGGAGGATGAGTCTGTGGATGTGGCTGTTTTTGCCTTTCACTGATGGGAACCAACAT CAGGGACTTCCTAGAGGAGGCAAATAGAGTACTGAAGCCAGGGGGTCTCCTGAAAGTGGCTGAGGTCAGCAGCCG CTTTGAGGATGTTCGAACCTTTCTGCGGGCTGTGACCAAGCTAGGCTTCAAGATTGTCTCCAAGGACCTGACCAA CAGCCATTTCTTCTTGTTTGATTTCCAAAAGACTGGGCCCCCTCTGGTAGGGCCCAAGGCTCAGCTTTCAGGCCT $\texttt{GCAGCTTCAGCCATGTCTCTACAAGCGCAGG} \underline{\textbf{TGA}} \texttt{CCTCTGGATCTTCCTTGAAAGGGGGAGGCAGATCTCAAACTC}$ CAGGCTCAGAACTGTGAAGACTGTTTCCAGCCTGGCTGTGAGCCAAGACCTGGTTCCTGGTGGACCCTGAGGACA AAGTGTGATAAAACCTCTGGCTCAGACTTGCTCTACTGAAGGCTTCTTGGTTATAAGATGCATAAAGTCACTGGG

MFEEPEWAEAAPVAAGLGPVISRPPPAASSQNKGSKRRQLLATLRALEAASLSQHPPSLCISDSEEEEEERKKKC PKKASFASASAEVGKKGKKKCQKQGPPCSDSEEEVERKKKCHKQALVGSDSAEDEKRKRKCQKHAPINSAQHLDN VDQTGPKAWKGSTTNDPPKQSPGSTSPKPPHTLSRKQWRNRQKNKRRCKNKFQPPQVPDQAPAEAPTEKTEVSPV PRTDSHEARAGALRARMAQRLDGARFRYLNEQLYSGPSSAAQRLFQEDPEAFLLYHRGFQSQVKKWPLQPVDRIA RDLRQRPASLVVADFGCGDCRLASSIRNPVHCFDLASLDPRVTVCDMAQVPLEDESVDVAVFCLSLMGTNIRDFL EEANRVLKPGGLLKVAEVSSRFEDVRTFLRAVTKLGFKIVSKDLTNSHFFLFDFQKTGPPLVGPKAQLSGLQLQP CLYKRR

ACGGGAGTTCCCCGGAGAAGGATCCTGCAGCCCGAGTCCCGAGGATAAAGCTTGGGGTTCATCCTTCCCTGG ATCACTCCACAGTCCTCAGGCTTCCCCAATCCAGGGGACTCGGCGCGGGACGCTGCTATGGACGACATTTTCAC TCAGTGCCGGGAGGGCAACGCAGTCGCCGTTCGCCTGTGGCTGGACAACACGAGAACGACCTCAACCAGGGGGA CGATCATGGCTTCTCCCCCTTGCACTGGGCCTGCCGAGAGGGCCGCTCTGCTGTTGATGATGATCATGCG GGGGGCACGGATCAATGTAATGAACCGTGGGGATGACACCCCCTGCATCTGGCAGCCAGTCATGGACACCGTGA TGCCTGTTTTTGGGGCCAAGATCAAGTGGCAGAGGACCTGGTGGCAAATGGGGCCCTTGTCAGCATCTGTAACAA GTATGGAGAGATGCCTGTGGACAAAGCCAAGGCACCCCTGAGAGAGCTTCTCCGAGAGCGGCAGAGAAGATGGG CCAGAATCTCAACCGTATTCCATACAAGGACACATTCTGGAAGGGGACCACCCGCACTCGGCCCCGAAATGGAAC CCTGAACAACACTCTGGCATTGACTTCAAACAGCTTAACTTCCTGACGAAGCTCAACGAGAATCACTCTGGAGA GCTATGGAAGGCCGCTGGCAGGCCAATGACATTGTCGTGAAGGTGCTGAAGGTTCGAGACTGGAGTACAAGGAA GAGCAGGGACTTCAATGAAGAGTGTCCCCGGCTCAGGATTTTCTCGCATCCAAATGTGCTCCCAGTGCTAGGTGC CTGCCAGTCTCCACCTGCTCCTCATCCTCATCACACACTGGATGCCATATGGATCCCTCTACAATGTACT ACATGAAGGCACCAATTTCGTCGTGGACCAGAGCCAGGCTGTGAAGTTTGCTTTGGACATGGCAAGGGGCATGGC AGCCCCCGAAGCTCTGCAGAAGAAGCCTGAAGACACAAACAGACGCTCAGCAGACATGTGGAGTTTTGCAGTGCT TCTGTGGGAACTGGTGACACGGGAGGTACCCTTTGCTGACCTCTCCAATATGGAGATTGGAATGAAGGTGGCATT AGACCCTGCAAAGCGACCCAAATTTGACATGATTGTGCCTATCCTTGAGAAGATGCAGGACAAGTAGGACTGGAA GGTCCTTGCCTGAACTCCAGAGGTGTCGGGACATGGTTGGGGGAATGCACCTCCCCAAAGCAGCAGGCCTCTGGT TGCCTCCCCGCCTCCAGTCATGGTACTACCCCAGCCATGGGGTCCATCCCCTTCCCCCATCCCTACCACTGTGG **TGTCACAATAAAGTTTATTATG**

CTGGCAAATGCAGTTACAGCCCGGAGCCCGACCAGCGGAGGACGCTGCCCCCAGGCTGGGTGTCCCTGGGCCGTG CGGACCCTGAGGAAGAGCTGAGTCTCACCTTTGCCCTGAGACAGCAGAATGTGGAAAGACTCTTGGAGCTGGTGC AGGCTGTGTCGGATCCCAGCTCTCCTCAATACGGAAAATACCTGACCCTAGAGAATGTGGCTGATCTGGTGAGGC CATCCCCACTGACCCTCCACACGGTGCAAAAATGGCTCTTGGCAGCCGGAGCCCAGAAGTGCCATTCTGTGATCA CACAGGACTTTCTGACTTGCTGGCTGAGCATCCGACAAGCAGAGCTGCTGCTCCCTGGGGCTGAGTTTCATCACT ATGTGGGAGGACCTACGGAGACCCATGTTGTAAGGTCCCCACATCCCTACCAGCTTCCACAGGCCTTGGCCCCCC ATGTGGACTTTGTGGGGGGACTGCACCGTTTTCCCCCAACATCATCCCTGAGGCAACGTCCTGAGCCGCAGGTGA CAGGGACTGTAGGCCTGCATCTGGGGGTAACCCCCTCTGTGATCCGTAAGCGATACAACTTGACCTCACAAGACG TGGGCTCTGGCACCAGCAATAACAGCCAAGCCTGTGCCCAGTTCCTGGAGCAGTATTTCCATGACTCAGACCTGG CTCAGTTCATGCGCCTCTTCGGTGGCAACTTTGCACATCAGGCATCAGTAGCCCGTGTGGTTGGACAACAGGGCC GGGGCCGGGCCGGGATTGAGGCCAGTCTAGATGTGCAGTACCTGATGAGTGCTGGTGCCAACATCTCCACCTGGG TCTACAGTAGCCCTGGCCGGCATGAGGGACAGGAGCCCTTCCTGCAGTGGCTCATGCTGCTCAGTAATGAGTCAG CCCTGCCACATGTGCATACTGTGAGCTATGGAGATGATGAGGACTCCCTCAGCAGCGCCCTACATCCAGCGGGTCA ACACTGAGCTCATGAAGGCTGCCGCTCGGGGTCTCACCCTGCTCTTCGCCTCAGGTGACAGTGGGGCCGGGTGTT GGTCTGTCTCTGGAAGACACCAGTTCCGCCCTACCTTCCCTGCCTCCAGCCCCTATGTCACCACAGTGGGAGGCA CATCCTTCCAGGAACCTTTCCTCATCACAAATGAAATTGTTGACTATATCAGTGGTGGTGGCTTCAGCAATGTGT TCCCACGGCCTTCATACCAGGAGGAAGCTGTAACGAAGTTCCTGAGCTCTAGCCCCCACCTGCCACCATCCAGTT ACTTCAATGCCAGTGGCCGTGCCTACCCAGATGTGGCTGCACTTTCTGATGGCTACTGGGTGGTCAGCAACAGAG TGCCCATTCCATGGGTGTCCGGAACCTCGGCCTCTACTCCAGTGTTTGGGGGGGATCCTATCCTTGATCAATGAGC ACAGGATCCTTAGTGGCCCCCCCTCTTGGCTTTCTCAACCCAAGGCTCTACCAGCAGCATGGGGCAGGACTCT TTGATGTAACCCGTGGCTGCCATGAGTCCTGTCTGGATGAAGAGGTAGAGGGCCAGGGTTTCTGCTCTGGTCCTG GCTGGGATCCTGTAACAGGCTGGGGAACACCCAACTTCCCAGCTTTGCTGAAGACTCTACTCAACCCCTGACCCT TTCCTATCAGGAGAGATGGCTTGTCCCCTGCCCTGAAGCTGGCAGTTCAGTCCCTTATTCTGCCCTGTTGGAAGC CCTGCTGAACCCTCAACTATTGACTGCTGCAGACAGCTTATCTCCCTAACCCTGAAATGCTGTGAGCTTGACTTG ACTCCCAACCCTACCATGCTCCATCATACTCAGGTCTCCCTACTCCTGCCTTAGATTCCTCAATAAGATGCTGTA TACAGACTCTGTGCACTATTTCACTTGATATTCATTCCCCAATTCACTGCAAGGAGACCTCTACTGTCACCGTTT ACTCTTTCCTACCCTGACATCCAGAAACAATGGCCTCCAGTGCATACTTCTCAATCTTTGCTTTATGGCCTTTCC ATCATAGTTGCCCACTCCCTCTCCTTACTTAGCTTCCAGGTCTTAACTTCTCTGACTACTCTTGTCTTCTCTCT CATCAATTTCTGCTTCTTCATGGAATGCTGACCTTCATTGCTCCATTTGTAGATTTTTGCTCTTCTCAGTTTACT CATTGTCCCCTGGAACAATCACTGACATCTACAACCATTACCATCTCACTAAATAAGACTTTCTATCCAATAAT GATTGATACCTCAAATGTAAGATGCGTGATACTCAACATTTCATCGTCCACCTTCCCAACCCCAAACAATTCCAT CTTCCAATTATATTCCCAAGTATATCTAGAACTTATCCACTTATATCCCCACTGCTACCTTAGTTTAGGGC TATATTCTCTTGAAAAAAAGTGTCCTTACTTCCTGCCAATCCCCAAGTCATCTTCCAGAGTAAAATGCAAATCCC ATCAGGCCACTTGGATGAAAACCCTTCAAGGATTACTGGATAGAATTCAGGCTTTCCCCTCCACCCCCCAATCAT AGCTCACAAACCTTCCTTGCTATTTGTTCTTAAGTAAAAAATCATTTTTCCTCCTCCCCCAAACCCCAAGGA ACTCTCACTCTTGCTCAAGCTGTTCCGTCCCCTTACCACCCCTGATACAACTGCCAGGTTAATTTCCAGAATTCT TGCAAGACTCAGTTCAGAAGTCACCTTCTTTCGTGAATGTTTTGATTCCCTGAGGCTACTTTATTTTGGTATGGC AAGTAAGCTTATCTCCCTGAGGCTGTTTCCTCGTCTGTTAAGTGTGAATATCAATACCTGCCTTTCATAATCACC AGGGAATAAAGTGGAATAATGTTGATAACAGTGCTTGGCACCTGGAAGTAGGTGGCAGATGTTAACGCCCTTCCT CCCTTGCACTGCGCCCCTGTGCCTACCTCTAGCATTGTAACGACCACATAGTATTGAAATGGCCAGTTTACTTG TCTGCCTTCCTTTCCAAGACCGTTGGTGCCTAGAGGACTAGAATCGTGTCCTATTTAACTTTGTGTTCCCAGGTC CTAGCTCAGGAGTTGGCAAATAAGAATTAAATGTCTGCTACACCGAAA

3419/6881 FIGURE 3153A

GCTGTGCAGGAGGCGGCCCCGGGCGTCAGCGGACGGACCGATCGCCGGCCAAGGGCGCGGGTCCGACGGCGGC TGCCCGGAGGGGATCGCGGGCCTCGGAGACAGCGACTGCGGACGATGCGCGGCTTCAGGCCCCGCGCGAGCGGGC GCTGCCCGGGGGGCTGACCGCGGCCGGACGGCGCCCCAGCACCGGGCGAGGGAGCCCGCGTCGCGCGGAGGTCAG GGAGCCTGAGCTGGAGCCAGGGCCCCAGTGGGACCTGACCCAAAGTCTGAGGTCAAGCTGGGCCCAGAGCCTGGC CTGGAGCTGGAGCCCAAGGCACCAGCTGGACTACCCTTGTCATGCAGAAGGAGCTGGGCATTGTGCCTTCCTGCCC TGGCATGAAGAGCCCCAGGCCCCACCTCCTGCTACCATTGCTGCTGCTGCTGCTGCTGCTGCTGGGGGCTGGGGGT CGACATCAGTGCGGGGCTTCCGGCAGGCACGCTCCTCTCATGTACTTCATCTCTGCCCAAGAGGGCAGCGG CGTGGGCACAGACCTGGCCATTGACGAACACAGTGGGGTCGTCCGTACAGCCCGTGTCTTGGACCGTGAGCAGCG GGACCGCTACCGCTTCACTGCAGTCACTCCTGATGGTGCCACCGTAGAAGTTACAGTGCGAGTGGCTGACATCAA CGACCATGCTCCAGCCTTCCCACAGGCTCGGGCTGCCCTGCAGGTACCTGAGCATACAGCTTTTGGCACCCGCTA CCCACTGGAGCCTGCTCGTGATGCAGATGCTGGGCGTCTGGGAACCCAGGGCTATCGGCTATCTGGTGATGGGGC TGGAGAGACCTTCCGGCTGGAGACACGCCCCGGTCCAGATGGGACTCCAGTACCTGAGCTGGTAGTTACTGGGGA ACTGGACCGAGAGAACCGCTCACACTATATGCTACAGCTGGAGGCCTATGATGGTGGTTCACCCCCCGGAGGGC CCAGGCCCTGCTGGACGTGACACTGCTGGACATCAATGACCATGCCCCGGCTTTCAATCAGAGCCGCTACCATGC TGTGGTGTCTGAGAGCCTGGCCCTGGCAGTCCTGTCTTGCAGGTGTTCGCATCTGATGCCGATGCTGGTGTCAA TGGGGCTGTGACTTACGAGATCAACCGGAGGCAGAGCGAGGGTGATGGACCCTTCTCCATCGACGCACACACGGG GCTGCTGCAGTTAGAGCGGCCACTGGACTTTGAGCAGCGGGGGGTCCATGAACTGGTGGTGCAAGCACGAGATGG TGGGGCTCACCCTGAGCTGGGCTCGGCCTTTGTGACTGTGCATGTGCGAGATGCCAATGACAATCAGCCCTCCAT GACTGTCATCTTCTCAGTGCAGATGGCTCCCCCCAAGTGTCTGAGGCCGCCCCACCTGGACAGCTCGTTGCTCG CATCTCTGTGTCAGACCCAGATGATGGTGACTTTGCCCATGTCAATGTGTCCCTGGAAGGTGGAGAGGGCCACTT CTATAACTTGAGGGTTACAGCCACAGACTCAGGCTCACCTCCACTGCGGGCTGAGGCTGCCTTTGTGCTGCACGT GCCTGGCAGCTTTGTAGTGCGGGTGACTGCTCGGGATCCTGACCAAGGCACCAATGGTCAGGTCACTTATAGCCT AGCCCCTGGCGCCCACACCCACTGGTTCTCCATTGACCCCACCTCAGGCATTATCACTACGGCTGCCTCACTGGA CTATGAGTTGGAACCTCAGCCACAGCTGATTGTGGTGGCCACAGATGGTGGCCTGCCCCCTCTAGCCTCCTCTGC ${\tt CACAGTTAGCGTGGCCCTGCAAGATGTGAATGATGATGAGCCCCAATTCCAGAGGACTTTCTACAATGCCTCACT}$ GCCTGAGGGCACCCAGCCTGGAACTTGCTTCCTGCAGGTGACAGCCACAGACGCGGATAGTGGCCCATTTGGCCT CCTCTCCTATTCCTTGGGTGCTGGACTTGGGTCCTCCGGATCTCCCCCATTCCGCATTGATGCCCACAGCGGTGA TGTGTGCACAACCCGGACCCTGGACCGTGACCAGGGGCCCTCAAGCTTTGACTTCACAGTGACAGCTGTGGATGG GGGAGGCCTCAAGTCCATGGTATATGTGAAGGTGTTTCTGTCAGACGAGAATGACAACCCTCCTCAGTTTTATCC ACGGGAGTATGCTGCCAGTATAAGTGCCCAGAGTCCACCAGGCACAGCTGTGCTGAGGTTGCGTGCCCATGACCC GCAATCAGGGCTGTTGACAGTAGCCTGGCCCTTGGCCAGACGGGCCAATTCTGTGGTGCAGCTGGAGATCGGGGC TGAGGACGGAGGTGGCCTACAGGCAGAACCCAGTGCCCGAGTGGACATCAGCATTGTGCCTGGAACCCCCACACC ACCCATATTTGAGCAACTACAGTATGTTTTTTCTGTGCCAGAGGATGTGGCCACCAGGCACCAGTGTGGGCATAGT CCAGGCACACACCCACCAGGTCGCTTGGCACCTGTGACCCTTTCCCTATCAGGTGGGGATCCCCGAGGACTCTT CTCCCTAGATGCGGTATCAGGACTGTTGCAAACACTTCGCCCTCTGGACCGGGAGCTACTGGGACCAGTGTTGGA GCTGGAGGTGCGAGCAGCAGTGGAGTGCCCCCAGCTTTCGCTGTAGCTCGGGTGCGTGTGCTGCTGGATGATGT GAATGACAACTCCCCTGCCTTTCCTGCACCTGAAGACACGGTATTGCTACCACCAAACACTGCCCCAGGGACTCC TGGTGGAGCCTTCACCGTGGACCCCACCACGGCCATGTACGGCTTATGAGGCCTCTGGGGCCCTCAGGAGGGCC AGCCCATGAGCTGGAGCTGGAGGCCCGGGATGGGGGCTCCCCACCACCACCACCACCACTTTCGACTACGGGTGGT CACCACTGCTGGAACTCAGGTCCTGCAAGTGCAGGCCCAAGCACCAGATGGGGGCCCTATCACCTATCACCTTGC TGAGGCCCAGGAATTGTACATACTGAAGGTAATGGCAGTGTCTGGGTCCAAAGCTGAGTTGGGGCAGCAGACAGG

3420/6881 FIGURE 3153B

CACAGCCACCGTGAGGGTCAGCATCCTCAACCAGAATGAACACAGTCCCCGCTTGTCTGAGGATCCCACCTTCCT GGCTGTGGCTGAGAACCAGCCCCCAGGGACCAGCGTGGGCCGAGTCTTTGCCACTGACCGAGACTCAGGACCCAA TGGACGTCTGACCTACAGCCTGCAACAGCTGTCTGAAGACAGCAAGGCCTTCCGCATCCACCCCCAGACTGGAGA AGTGACCACACTCCAAACCCTGGACCGTGAGCAGCAGCAGCTATCAGCTCCTGGTGCAGGTGCAGGATGGAGG GAGCCCACCCGCÁGCACCACAGGCACTGTGCATGTTGCAGTGCTTGACCTCAACGACAACAGCCCCACGTTCCT GCAGGCTTCAGGAGCTGCTGGTGGGGGCCTCCCTATACAGGTACCAGACCGCGTGCCTCCAGGAACACTGGTGAC GACTCTGCAGGCGAAGGATCCAGATGAGGGGGAGAATGGGACCATCTTGTACACGCTAACTGGTCCTGGCTCAGA GCTTTTCTCTCTGCACCCTCACTCAGGGGAGCTGCTCACTGCAGCTCCCCTGATCCGAGCAGAGCGGCCCCACTA TGTGCTGACACTGAGTGCTCATGACCAAGGCAGCCCTCCTCGAAGTGCCAGCCTCCAGCTGCTGGTGCAGGTGCT TCCCTCAGCTCGCTTGGCCGAGCCGCCCCCAGATCTCGCAGAGCGGGACCCAGCGGCACCAGTGCCTGTCGTGCT GACGGTGACAGCAGCTGAGGGACTGCGGCCCGGCTCTCTGTTGGGCTCGGTGGCAGCGCCAGAGCCCGCGGGTGT GGGTGCACTCACCTACACCTGGTGGGCGGTGCCGATCCCGAGGGCACCTTCGCGCTGGATGCGGCCTCAGGGCG CTTGTACCTGGCGCGCCCCTGGACTTCGAAGCTGGCCCGCGTGGCGCGCTCACGGTACGCGCTGAGGGGCC GCGCGACCCGCTGGCGCTGCCAGAGAACCCGGAGCCCGGCGCAGCGCTGTACACTTTCCGCGCGTCGGA CGCCGACGGCCCCGATAGCGACGTGCGCTACCGCTGCTGCGCCAGGAGCCGCCCGTGCCGGCGCTTCG CCTGGACGCGCGCACCGGGGCGCTCAGCGCTCCGCGCGCCTGGACCGAGAGACCACTCCCGCGCTGCTGCTGCT GGTGGAAGCCACCGACCGCCCACCCCACCCCCCGTCGTGCAGCGCGCGTTTCAGCGCGCGTCTTCGTCAC GGATGAGAATGACAACGCGCCTGTCTTCGCCTCGCCGTCACGCGTGCGCCTCCCAGAGGACCAGCCGCCTGGGCC CGCGGCCCTGCACGTGGTAGCCCGGGACCCGGATCTGGGCGAGGCTGCACGCGTGTCCTATCGGCTGGCATCTGG CGGGGACGGCCACTTCCGGCTGCACTCAAGCACTGGAGCGCTGTCCGTGGTGCGGCCGTTGGACCGCGAACAACG AGCTGAGCACGTACTGACAGTGGTGGCCTCAGACCACGGCTCCCCGCCGCTCGGCCACGCAGGTCCTGACCGT CAGTGTCGCTGACGTCAACGACGAGGCGCCTACTTTCCAGCAGCAGGAGTACAGCGTCCTCTTGCGTGAGAACAA CCCTCCTGGCACATCTCTGCTCACCCTGCGAGCAACCGACCCCGACGTGGGGGCCAACGGGCAAGTGACTTATGG AGGCGTCTCTAGCGAAAGCTTTTCTCTGGATCCTGACACTGGTGTTCTCACGACTCTTCGGGCCCTGGATCGAGA GGAACAGGAGGAGATCAACCTGACAGTGTATGCCCAGGACAGGGGCTCACCTCCTCAGTTAACGCATGTCACTGT TCGAGTGGCTGTGGAGGATGAGAATGACCATGCACCAACCTTTGGGAGTGCCCATCTCTCTGTGGAGGTGCCTGA GGGCCAGGACCCCAGACCCTTACCATGCTTCGGGCCTCTGATCCAGATGTGGGAGCCAATGGGCAGTTGCAGTA ${\tt CACGCTGCTTTTGACAGTGACAGTGCTGGATGCCAATGACCATGCTCCAGCCTTTCCTGTGCCTACTCGGT}$ GGAGGTGCCGGAGGATGTGCCTGCAGGGACCCTGCTGCTGCAGCTACAGGCTCATGACCCTGATGCTGGAGCTAA TGGCCATGTGACCTACTACCTGGGCGCCGGTACAGCAGGAGCCTTCCTGCTGGAGCCCAGCTCTGGAGAACTGCG CACAGCTGCAGCCTTGGACAGAGAACAGTGTCCCAGCTACACCTTTTCTGTGAGTGCAGTGGATGGTGCAGCTGC CAGTCCTCTGCGCCTACGTCTGCCCCGCCCAGGCCCCAGCTTCAGTACCCCAACCCTGGCTCTGGCCACACTGAG TGTGGACTCTTACACTGGTGAAATCCGCGTGGCCCGCTCTCCTGTAGCTCTAGGCCCCCGAGATCGTGTCCTCTT CATTGTGGCCACTGATCTTGGCCGTCCAGCTCGCTCTGCCACTGGTGTGATCATTGTTGGACTGCAGGGGGAAGC TGAGCGTGGACCCCGCTTTCCCCGGGCTAGCAGTGAGGCTACGATTCGTGAGAATGCGCCCCCAGGGACTCCTAT TGTCTCCCCCACGGCCGTCCATGCAGGAGGCACAAATGGACCCATCACCTACAGCATTCTCAGTGGGAATGAGAA AGGGACATTCTCCATCCAGCCTAGTACAGGTGCCATCACAGTTCGCTCAGCAGAGGGGCTAGACTTCGAGGTGAG TCCACGGCTGCGACTGCTGCAGGCAGAGAGTGGAGGAGCCTTTGCCTTCACTGTGCTGACCCTGACCCTGCA GGGGCCCCTGCTGCAGGTGGAGGCGGATGACCTGGATCAAGGCTCTGGAGGACAGATTTCCTACAGTCTGGCTGC ATCCCAGCCGGCACGTGGATTGTTCCACGTAGACCCAACCACAGGCACTATCACTACCACAGCCATCCTGGACCG CTTGACGGTGATGGTCATCGACACCAATGACAATCGCCCCACCATCCCCCAACCCTGGGAGCTCCGAGTGTCAGA

3421/6881 FIGURE 3153C

AGATGCGTTATTGGGCTCAGAGATTGCACAGGTAACAGGGAATGATGTGGACTCAGGACCCGTGCTGTGGTATGT GCTAAGCCCATCTGGGCCCCAGGATCCCTTCAGTGTTGGCCGCTATGGAGGCCGTGTCTCCCTCACGGGGCCCCT GGACTTTGAGCAGTGTGACCGCTACCAGCTGCAGCTGCTGCACATGATGGGCCTCATGAGGGCTGTGCCAACCT CACAGTGCTTGTGGAGGATGTCAATGACAATGCACCTGCCTTCTCACAGAGCCTCTACCAGGTAATGCTGCTTGA GCACACCCCCAGGCAGTGCCATTCTCTCCGTCTCTGCCACTGATCGGGACTCAGGTGCCAACGGTCACATTTC CTACCACCTGGCTTCCCCTGCCGATGGCTTCAGTGTTGACCCCAACAATGGGACCCTGTTCACAATAGTGGGAAC AGTGGCCTTGGGCCATGACGGGTCAGGAGCAGTGGATGTGGTGCTGGAAGCACGAGACCACGGGGCTCCAGGCCG GGCAGCACGAGCCACAGTGCACGTGCAGCTGCAGGACCAGAACGACCACGCCCCGAGCTTCACATTGTCACACTA CCGTGTGGCTGTGACTGAAGACCTGCCCCCTGGCTCCACTCTGCTCACCCTGGAGGCTACAGATGCTGATGGAAG $\tt CCGCAGCCATGCCGCTGTGGACTACAGCATCATCAGTGGCAACTGGGGCCGAGTCTTCCAGCTGGAACCCAGGCT$ GGCTGAGGCTGGGAGAGTGCTGGACCAGGCCCCCGGGCACTGGGCTGCCTGGTGTTGCTTGAACCTCTAGACTT TGAAAGCCTGACACAGTACAATCTAACAGTGGCTGCAGCTGACCGTGGGCAGCCACCCCAAAGCTCAGTCGTGCC AGTCACTGTCACTGTACTAGATGTCAATGACAACCCACCTGTCTTTACCCGAGCATCCTACCGTGTGACAGTACC TGAAGACACCTGTTGGAGCTGAGCTGCTGCATGTAGAGGCCTCTGACGCTGACCCTGGCCCTCATGGCCTCGT GCGTTTCACTGTCAGCTCAGGCGACCCATCAGGGCTCTTTGAGCTGGATGAGAGCTCAGGCACCTTGCGACTGGC ${\tt CCATGCCTGGACTGTGAGACCCAGGCTCGACATCAGCTTGTAGTACAGGCTGCTGACCCTGCTGGTGCACACTT}$ TGCTTTGGCACCAGTGACAATTGAGGTCCAGGATGTGAATGATCATGGCCCAGCCTTCCCACTGAACTTACTCAG TTTTGGGAGGCTCCGTTACAGCCTGTTGGAGGCTGGGCCAGGACCTGAGGGCCGTGAGGCATTTGCACTGAACAG TGCTGATGCTGGGAATCTCTCAGCCTCTGTCACTGTGTCGGTGCTAGTGACTGGAGAGGATGAGTATGACCCTGT ATTTCTGGCACCAGCTTTCCACTTCCAAGTGCCCGAAGGTGCCCGGCGTGGCCACAGCTTGGGTCACGTGCAGGC CACAGATGAGGATGGGGGTGCCGATGGCCTGGTTCTGTATTCCCTTGCCACCTCTTCCCCCTATTTTGGTATTAA CCAGACTACAGGAGCCCTGTACCTGCGGGTGGACAGTCGGGCACCAGGCAGCGGAACAGCCACCTCTGGGGGTGG GGGCCGGACCCGGCGGAAGCACCACGGGAGCTGAGGCTGGAGGTGATAGCACGGGGGCCTCTGCCTGGTTCCCG GAGTGCCACAGTGCCTGTGACCGTGGATATCACCCACACCGCACTGGGCCTGGCACCTGACCTCAACCTGCTATT AGTAGGGGCCGTGGCAGCCTCCTTGGGAGTTGTGGTGGTGCTTGCACTGGCAGCCCTGGTCCTAGGACTTGTTCG GGCCCGTAGCCGCAAGGCTGAGGCAGCCCCTGGCCCAATGTCACAGGCAGCACCCCTAGCCAGTGACTCACTGCA GAAACTGGGCCGGGAGCCACCTAGTCCACCACCCTCTGAGCACCTCTATCACCAGACTCTTCCCAGCTATGGTGG GCCAGGAGCTGGAGGACCCTACCCCCGTGGTGGCTCCTTGGACCCTTCACATTCAAGTGGCCGAGGATCAGCAGA GGCTGCAGAGGATGATGAGATCCGCATGATCAATGAGTTCCCCCGTGTGGCCAGTGTGGCCTCCTCTCTGGCTGC CCGTGGCCCTGACTCAGGCATCCAGCAGGATGCAGATGGTCTGAGTGACACATCCTGCGAACCACCTGCCCCTGA CACCTGGTATAAGGGCCGAAAGGCAGGGCTGCTGCCAGGTGCAGGAGCCACTCTCTACAGAGAGGGGGGCC $\verb|CCCAGCCACTGCCACAGCCTTCCTGGGGGGGCTGTGGCCTGAGCCCTGCACCCACTGGGGACTATGGCTTCCCAGC| \\$ AGATGGCAAGCCATGTGTGGCAGGTGCGCTGACAGCCATTGTGGCCGGCGAGGAGGAGCTCCGTGGCAGCTATAA CTGGGACTACCTGCTGAGCTGGTGCCCTCAGTTCCAACCACTGGCCAGTGTCTTCACAGAGATCGCTCGGCTCAA AGCCAAGTCTGTGCCCCCCAAGCCAGCAAACACAGCTGCAGCCCGGGCCATCTTCCCACCAGCTTCTCACCGCTC CCCCATCAGCCATGAAGGCTCCCTGTCCTCAGCTGCCATGTCCCCCAGCTTCTCACCCTCTCTGTCTCTCTGGC TGCTCGCTCACCCGTTGTCTCACCATTTGGGGTGGCCCAGGGTCCCTCAGCCTCAGCACTCAGCGCAGAGTCTGG CCTGGAGCCACCTGATGACACGGAGCTGCACATCTAGCTGTGGCCCAGGCTGGGCCCCGACCTGGGATGCGCACA GTGTCCCCAACGCAGGCCCCACTCTGAGCCTGCCCTGGGCAGCCTCGGACTATGACTGGCTACGGGGAGGCCACC ACCAGGCCCCAGCTCTCACCCTGAACTCCCCAGCCCCTCAGAGTACTAGGACCACAGAAGCCCTGTTGCTCAC TGACCTGTGACCAGGTCCAATGTGGGGAGAAATATGAAGGAGGTAGCAGCCCTGGGTTCTCCTCAGTGAGGGATC CAACATGTTTGGACCCAGCTCCTTTGGGTTCCACTGACACCCCTGCCCCTGCCCCAGAACCAAGTGCCAT TTCTCACTCTGGAGCCTTAATAAACTGCAATTTGT

 ${\tt MKAPCPQLPCPPASHPLCLLWLLAHPLSHHLGWPRVPQPQHSAQSLAWSHLMTRSCTSSCGPGWAPTWDAHSVPN} \\ {\tt AGPTLSLPWAASDYDWLRGGHHQAPALHPELPSPLRVLGPQKPCCSLTCDQVQCGEKYEGGSSPGFSSVRDPCPAPAP} \\ {\tt PAP} \\$

CTTTTTCGTCTGGGCTGCCAACATGCCATCCAGACTGAGGAAGACCCGGAAACTTAGGGGCCACGTGAGCCACGG
CCACGGCCGCATAGGCAAGCACCGGAAGCACCCCGGCGGCGGCGGCGGTAATGCTGGTGGTCTGCATCACCACCGGAT
CAACTTCGACAAATACCACCCAGGCTACTTTGGGAAAGTTGGTATGAAGCATTACCACTTAAAGAGGAACCAGAG
CTTCTGCCCAACTGTCAACCTTGACAAATTGTGGACTTTGGTCAGTGAACAGACACGGGTGAATGCTGCTAAAAA
CAAGACTGGGGCTGCTCCCATCATTGATGTGGTGCGATCGGGCTACTACAAAGTTCTGGGAAAGGGAAAGCTCCC
AAAGCAGCCTGTCATCGTGAAGGCCAAATTCTTCAGCAGAAGAGCTGAGGAGAAGATTAAGAGTGTTGGGGGGGC
CTGTGTCCTGGTGGCT<u>TGA</u>AGCCACATGGAGGGAGTTTCATTAAATGCTAACTACTTTTAAAAA

 ${\tt MPSRLRKTRKLRGHVSHGHGRIGKHRKHPGGRGNAGGLHHHRINFDKYHPGYFGKVGMKHYHLKRNQSFCPTVNLDKLWTLVSEQTRVNAAKNKTGAAPIIDVVRSGYYKVLGKGKLPKQPVIVKAKFFSRRAEEKIKSVGGACVLVA}$

3425/6881 FIGURE 3157A

AAGGCATCCAGGATGCGGTGCGGGGCCGGTGCCCCCCGCCCCGTCACGGCAGCCGGCGGCGGCCGAGGGGA CGGCGGCGGCGGAGGGGGCTCGGCCCAGTCGCTTCGCCGACTACTTTGTCATCTGCGGACTGGACACGGAGAC TTTCATTTCAAGTACGACTGAAGGAGAAAATTTTGAGCAGACACCATTGAGAAGAACATTCAAATCTAAGGTCCT GCTGGCATTCAAGACCCAGGCTGATCCCAGGGAGCCCCAATTCCATGCCTTTATTATCACAAGGGAGGATGGCTC CTACCACATGCACAATGCTGAGTATGATGTCCTACATGCTCCCCCTGCTGATGACAGAGCCAGAGCAGCATGGA GGATGGTGAAGACACTCCTGTGACCAAACTGCAGCGCTTCAACTCCTATGACATTAGCCGGGACACTCTCTACGT CTCTAAGTGCATCTGCCTCATCACCCCATGTCTTTCATGAAGGCATGTCGGAGCGTGCTGGAGCAACTCCACCA GGCAGTCACTTCACCTCAGCCCCTCCACTGCCCCTTGAGAGCTACATATACAACGTACTCTACGAGGTGCCGCT CCCACCTCCTGGCCGGTCCTTGAAGTTTTCTGGGGTCTATGGGCCAATAATCTGCCAGAGACCAAGTACCAATGA GCTTCCCCTATTTGACTTTCCTGTCAAAGAGGTTTTTGAACTGCTCGGGGTGGAGAATGTGTTTCAGCTTTTTAC TTGTGCCCTTCTGGAGTTTCAAATCCTGCTCTACTCACAGCATTACCAGAGACTGATGACTGTGGCGGAGACGAT TACAGCTCTCATGTTTCCTTTCCAGTGGCAGCATGTCTATGTCCCTATTCTCCCAGCTTCTCTCCTGCATTTCTT AGATGCTCCTGTTCCATACCTGATGGGTTTGCATTCCAATGGCCTGGATGACCGGTCAAAGCTGGAGCTGCCTCA AGAGGCTAACCTCTGCTTTGTGGACATTGACAACCACTTCATTGAGTTGCCAGAGGACTTGCCACAGTTCCCCAA CAAATTGGAGTTTGTCCAGGAAGTCTCTGAGATTCTCATGGCATTTGGAATTCCCCCTGAAGGGAATCTTCATTG CAGTGAGAGTGCCTCCAAGCTGAAGAGGCTGCGGGCCTCTGAGCTTGTCTCGGACAAGAGGAATGGGAACATTGC TGGCTCCCCTTTGCATTCCTACGAGCTTCTTAAGGAGAATGAAACTATTGCCCGGCTGCAAGCCTTGGTCAAGAG AACTGGGGTGAGCCTGGAAAAGTTGGAAGTGCGTGAAGACCCCAGCAGCAATAAGGATCTCAAAGTTCAGTGTGA TGAAGAAGAACTCAGGATTTACCAGCTAAACATTCAGATCCGGGAAGTTTTTGCAAATCGTTTCACTCAGATGTT TGCAGATTATGAGGTGTTTGTCATCCAACCCAGCCAGGATAAGGAATCCTGGTTTACCAACAGGGAGCAAATGCA AAACTTTGATAAAGCATCTTTTCTGTCAGATCAGCCTGAGCCCTACCTGCCCTTCCTCCAAGATTCCTGGAGAC CCAGATGTTTGCATCTTTCATTGACAACAAAATAATGTGTCATGATGATGATAAAGACCCTGTACTCCGGGT ATTTGATTCCCGAGTTGACAAGATCAGGCTGTTGAATGTTCGGACACCTACTCCCGTACATCCATGTACCAGAA GTGTACCACTGTGGATGAAGCAGAGAAAGCAATTGAGCTGCGTCTGGCAAAAATTGACCATACTGCAATTCACCC ACATTTACTTGACATGAAGATTGGACAAGGGAAATATGAGCCGGGCTTCTTCCCTAAGCTGCAGTCTGATGTACT TTCCACTGGGCCAGCCAGCAACAAGTGGACGAAAAGGAATGCCCCTGCCCAGTGGAGGCGGAAAGATCGGCAGAA GCAGCACACAGAACACCTGCGTTTAGATAATGACCAGAGGGAGAAGTACATCCAGGAAGCCAGGACTATGGGCAG CACTATCCGCCAGCCCAAACTGTCCAACCTCTCTCCATCAGTGATTGCCCAGACCAATTGGAAGTTTGTAGAGGG CCTGCTGAAGGAATGCCGCAATAAGACCAAGAGGATGCTGGTGGAAAAGATGGGCCGAGAAGCTGTGGAGCTAGG GCATGGGGAGGTGAACATCACAGGGGTGGAAGAGAACACCCTGATTGCCAGCCTTTGTGATCTCCTGGAAAGGAT CTGGAGTCATGGACTACAAGTGAAACAGGGGAAATCAGCCTTATGGTCCCACCTGTTACATTATCAGGACAACCG GCAGAGAAAACTCACATCAGGAAGCCTCAGTACCTCAGGAATACTTCTTGATTCAGAACGTAGGAAGTCTGATGC CAGCTCACTCATGCCTCCCCTGAGGATCTCCCTGATTCAGGATATGAGGCACATCCAGAACATCGGGGAGATCAA GACTGATGTGGGA<u>TAG</u>GCAGAGCATGGGTGCGACATGTCATGGAAAAAAGTTACTTTCAGACACCTGAGCAGCTC TCTCAGACATGAGCTCACAAAAAGTTATATAAGCGCTATGCCTTCCTGCGCTGTGATGACGAGAAGGAGCAGTTC CTCTATCACCTCCTGTCTTTCAATGCCGTCGATTACTTTTGCTTCACCAATGTCTTCACAACTATCCTGATCCCG TACCACATTCTGATCGTACCAAGCAAGAAGCTGGGGGGCTCCATGTTCACTGCCAACCCATGGATCTGTATATCA GGAGAATTGGGTGAGACACAGATCATGCAGATTCCCAGGAATGTGCTAGAGATGACCTTCGAGTGCCAGAACTTG GGGAAGCTTACTACTGTCCAGATTGGCCATGATAACTCTGGGCTGTAATGCAAATGGCTGGTGGAGTATGTGATG GTCAGGAATGAGATCACAGGACATACCTACAAGTTCCCGTGTGGCCGGTGGTTAGGGAAGGGCATGGATGATGGA AGCCTGGAGCGGATCCTAGTTGGGGAGCTGCTCACATCCCAGCCTGAGGTGGATGAGAGGCCATGCCGGACCCCG CCGCTGCAGCAGTCCCCCAGTGTCATCCGGAGGCTTGTTACCATCTCACCCAACAACAAGCCCAAGCTGAACACT GGGCAGATCCAGGAGTCCATCGGGGAGGCAGTCAATGGCATTGTGAAGCACTTCCATAAGCCTGAGAAAGAGCGA

3426/6881 FIGURE 3157B

GGCAGTCTGACGCTGTTGCTCTGTGGAGAGTGTGGCCTTGTCTCGGCCTTGGAACAGGCTTTCCAGCATGGATTT AAATCGCCCCGGCTCTTCAAAAATGTCTTCATTTGGGATTTCCTGGAAAAAGCACAAACCTATTATGAGACATTA GAGAAGAATGAAGTAGTCCCTGAGGAAAACTGGCATACAAGAGCCCGGAACTTCTGCCGATTTGTCACTGCAATC AACAATACTCCCCGGAACATCGGCAAGGATGGCAAGTTTCAGATGCTGGTGTGCTTGGGAGCCAGAGATCACCTC CTACACCACTGGATTGCCCTGCTGGCTGACTGCCCCATCACTGCACACATGTATGAGGATGTGGCACTGATCAAA GACCATACACTTGTCAATTCCTTGATTCGTGTGCTGCAGACATTGCAGGAGTTCAACATCACGCTGGAGACGTCC AACTAGAGGATTTTTGGAATAAATAATCTATTTTAGAGTTTATTTGCTGATTTGCTTTTTACACACTTTCATGTG ATTAATGAGGCCCTTCCACATCATTTTTAAACTAATGTTTTTCTATATTAACATTATTATGGATATTTGGCTTTC ATAGGCCACACACAGGTGTGCTGCGCGGGAAGCCCCATGCTCCAATCAAAGGGATTTTTAGTAGTGCCTCTAAGC AAGCACCGATGAGTCAGTCCCACGTATTTTCTTTTTTGTCAGTATTGTTTGGGAAGGAGACATGCCGGGATGTGT CATCGTGCCAAATACCACATTTCCTGTTGGCACAGTTTCACAGAAGTAAACATAAGCATGTTTTAACAGGTTTTT CTTTTCTTTTTTTTTAAAATGTTTTATTTATTTAACCCGCCATTGTGTGTTTTTAAGTATTTTCTTTTTT AAGGAAAGGAAAAGCTTGTCACAATCTAACTGGCTATGTTATTATTATTATTATGTTTTTGCAACTTAGAAAC CAGCTACAGTATGGCCCACTTAATAAAACACCTGAAAC

MSGGGGGGGSAPSRFADYFVICGLDTETGLEPDELSALCQYIQASKARDGASPFISSTTEGENFEQTPLRRTFKS
KVLARYPENVEWNPFDQDAVGMLCMPKGLAFKTQADPREPQFHAFIITREDGSRTFGFALTFYEEVTSKQICSAM
QTLYHMHNAEYDVLHAPPADDRDQSSMEDGEDTPVTKLQRFNSYDISRDTLYVSKCICLITPMSFMKACRSVLEQ
LHQAVTSPQPPPLPLESYIYNVLYEVPLPPPGRSLKFSGVYGPIICQRPSTNELPLFDFPVKEVFELLGVENVFQ
LFTCALLEFQILLYSQHYQRLMTVAETITALMFPFQWQHVYVPILPASLLHFLDAPVPYLMGLHSNGLDDRSKLE
LPQEANLCFVDIDNHFIELPEDLPQFPNKLEFVQEVSEILMAFGIPPEGNLHCSESASKLKRLRASELVSDKRNG
NIAGSPLHSYELLKENETIARLQALVKRTGVSLEKLEVREDPSSNKDLKVQCDEEELRIYQLNIQIREVFANRFT
QMFADYEVFVIQPSQDKESWFTNREQMQNFDKASFLSDQPEPYLPFLSRFLETQMFASFIDNKIMCHDDDDKDPV
LRVFDSRVDKIRLLNVRTPTLRTSMYQKCTTVDEAEKAIELRLAKIDHTAIHPHLLDMKIGQGKYEPGFFPKLQS
DVLSTGPASNKWTKRNAPAQWRRKDRQKQHTEHLRLDNDQREKYIQEARTMGSTIRQPKLSNLSPSVIAQTNWKF
VEGLLKECRNKTKRMLVEKMGREAVELGHGEVNITGVEENTLIASLCDLLERIWSHGLQVKQGKSALWSHLLHYQ
DNRQRKLTSGSLSTSGILLDSERRKSDASSLMPPLRISLIQDMRHIQNIGEIKTDVG

MTNTKGKRRGTRYMFSRPFRKHGVVPLATYMRIYKKADIVDIKGMGTAQKGMPHKCYHGKTGRVYNVTQHAVGIV VNKQVKGKILAKRIKVRIEHIKHSKSRDSFLKHVKENDQKKKDAKEKGTWVQLKRQPAPPREAHFVRTNGKQPEL LEPISYEFMA

3430/6881 FIGURE 3161A

CCATGGGGAGCTTGAAGGAGCAGCTGCTCAAAGCCATCTGGCACGCCTTCACCGCACTCGACCAGGACCACAGCG GCAAGGTCTCCAAGTCCCAGCTCAAGGTCCTTTCCCATAACCTGTGCACGGTGCTGAAGGTTCCTCATGACCCAG TTGCCCTTGAAGAGCACTTCAGGGATGATGATGAGGGTCCAGTGTCCAACCAGGGCTACATGCCTTATTTAAACA GGTTCATTTTGGAAAAGGTCCAAGACAACTTTGACAAGATTGAATTCAATAGGATGTTTGGACCCTCTGTGTCA AAAAAACCTCACAAAGAATCCCCTGCTCATTACAGAAGAAGATGCATTTAAAATATGGGTTATTTTCAACTTTT TATCTGAGGACAAGTATCCATTAATTATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTA TGGGAGGAGGTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATGGCCTTTCTG CATGGGAACTTATTGAGCTTATTGGAAATGGACAGTTTAGCAAAGGCATGGACCGGCAGACTGTCTATGGCAA TTAATGAAGTCTTTAATGAACTTATATTAGATGTGTTAAAGCAGGGTTACATGATGAAAAAGGGCCACAGACGGA AGAAAGGAGACATTCTCTTGGATGAAAATTGCTGTGTAGAGTCCTTGCCTGACAAAGATGGAAAGAATGCCTTT TTCTCGTAAAATGTTTTGATAAGACTTTTGAAATCAGTGCTTCAGATAAGAAGAAGAAACAGGAGTGGATTCAAG CCATTCATTCTACTATTCATCTGTTGAAGCTGGGCAGCCCTCCACCACACAAAGAAGCCCGCCAGCGTCGGAAAG AACTCCGGAAGAAGCAGCTGGCTGAACAAGAGGAACTGGAGCGACAAATGAAGGAACTCCAGGCCGCCAACGAAA GCAAGCAGCAGGAGCTGGAGGCCGTGCGGAAGAAACTGGAGGAAGCAGCATCTCGTGCAGCAGAAGAAGAAAAAAA AGATGGAAGAACAGGTTGCTCAAAAGTCCTCTGAACTGGAACAGTATTTACAGCGAGTACGGGAGCTGGAAGACA TGTACCTAAAGCTGCAGGAGGCTCTTGAAGATGAGAGACAGGCCCGGCAAGATGAAGACAGTGCGGAAGCTTC AGGCCAGGTTGTTGGAGGAAGAGTCTTCCAAGAGGGCTGAACTAGAAAAGTGGCACTTGGAGCAGCAGCCA TTCAGACAACCGAGGCGGAGAAGCAGGAGTTGGAGAATCAGCGTGTCCTGAAGGAACAGGCCCTGCAGGAGGCCA AGATGGCAACTAATAAGACCAAGAGCTGGAAGGACAAAGTGGCCCATCATGAAGGATTAATTCGACTGATAGAAC AGAAGAACTGGAAAGAGAAAAAGACCACGGAGTGACTGAGCTTGCTGGCAGTCACGTCAGTTATGTAGATACTGC ATGGCAGGAGAGCTTTACGCTAAAGACAAAAGAAACAGCTTTGGGGGCCGGGCGTGGTGGCTCACGCCTGTAATC CCAGCACTTTGGGAGGCCGAGGCGGGTGGATCACCTGAGGTCAGGAGTTCAAGAGCAGCCTGGCCAACCTGGTGA GAGGCTGAGGCAGGAGAATCACTTGAACGTGGGAGGCGGAGGTTGCAGCGAGCTGAGATCATGCCGTTGTACTCC AGCTTGGGCAACAGAGTGAGACTCCATCTCAAAAACAAAACAAAACAAAACAAAACAAAAACCCGGCTTTGCTG CACCTTCTGAAATTTGTCTTTTAGCTCTCTCAGATTCTTCCCCAAATGAGGCAGGGTGCAGACAGCACAGTCAGC TCTGCAGAGTTTGGAGGGGCTCACTGCCACTGGGTACTCAGAACCTCTGTGGACTGGATGTCAGCTCTTTCCTTT GGCAGCGTGTTTCCTTTTCCGAGTATGTGCTGTTAAACTAGATTGGCCGGTTCGCTTTCCATTTCCTGACACTTG ACATGGAATGCCTTTGACCATTGGTGCTCTGACAGAGAAGTCATGGAGTCATTGCCATTTCCTGGTTGCCCTTTT ATGTTTCATTCCCATCTCCTTTCCCCTCACCTTAAAGGAGACTACCCCTTTGCCCCATATTGTCAACCTAATTTT CTCTCGTACTCTCTAGTGAATGATGTGCTACCAAGTATATGCCAGGCTGTGAGAGGATTATACTGAGTAGTAG AAAGAAGCTAATTTGAAATAAAAATTATTTGTATAATTAAGAAAGCAGATTAGATGCACATGGTCAACAGGAAGT TGACTGTATGTCTGCTAGTTAGATTCAAAACATCATAAAGATGATAGCATGTCAATATATTAGCCTAGCCATTAT GTTAGCCTTTGTTAGGTGGGCAGCTTTTCTGCTTTTTCCCTTCCTCTGTGGTGACAACGGAGGAAATATCCAACA GAAATACGTCTAACAGGGAAATTGGGATCATAGTTTATATGCATCTGATTTGAAAGGAGTATTGAGGAAGGTTTT CATATATGATCTATCTTTGGATTAAAAAGAACATTTATGAAATCAAGCCTTCTAACACTAGTTATAATTGAGAAG AAGGGCAGAATTCAGTAGAATAAAGTCCTTTTCTCTTACAGGTATTAAATGAGGACAGAGAACCTCAGGTGTTCT GAGATTCAGTGTATGTATTTATTTACATGAGAGGAAACTGGAATATAATCCCATAAATTATCACCTTTTATGACT

3431/6881 FIGURE 3161B

GGAAAATATTTTGCCAATGAAGAAATGGTCTGTAGGTATTTTGTCTTAAGATTTTTTGGCTGTTTAATAAAAATGTAA CTTTAACGGTTTCTTATAGTTGCCTTTATAAAGTGTATTGTCTAAAATATTTTTGTATCATGTGCCTTTGAAATT TGACAGCTGATTTGGGTGTTGGATTTCTGCCCAGCCATTTATCAGTATTATCATTTTATTCAGTAGCTGGCAGGT GTATTAGACCAACGAGACTTAGGTAAGGAATGGAACCTTTCCTGTGGTTTGACTGCACATTACACCAGAAGACTC CAGTATCCCTCATTCCAGAATGAGGAAAAAGTATTCTACAAAGAACCTAATCACCTCTGTGAAATCTATGGGATG GAAACAGTGTGGCCTTAGGAGTCAAATAGTCTCTGCATGGTGGGGAGGATCATGATGGAATATGTGAATTTCTAC TTCTAGAAGTTGTGAAATAGGTCCTGCACTTTTGCAGAATGTCCTTCTTTAAACCTGGCTTATTCCACAGCTGTA GCTGATAACATGACCTGGGGCTTAGCTCTAGCCCTGGGTTCTTGGAGACCTCACACTGCCTGGCCCCTGGCC ATCCACCTAAGGACTGCCTGCTTTCTGGTCACATGTGGACCTTGATACGACTAAGCGGTTACATATGTGGTTGTG CAAAAGCTTTCTGTTTAATGCATAGTGTTACCGATTTACATCTTGGTTTTCAGTGGCACTATGTCTAGGAGGCAA TATCCTTTTAAACAGTGCTTTGGCTAAGATAGATACTTGTGAATCAAAGATAGCACAGAAATGAACTAAGTATAT CCCATTTGGAATTATATTTTGATACTATTTAAAATGGTTTCACCTGTTAAAGGGCCCAACAGAACTCTTGGTTTTA $\tt CTTTTGTAATTACTGTACAGAAAATTTCAAGAGTGTTTGAGTGCTTGTCATCAGGTGTTTTCCTTAATAAGTAGG$ GATATGATCATTTACAGGAATTATATGAAAAAAGTTTTTGAAATGTATTTTTGTGATGTGCTATGTTGAGGGG AAACCAAATATTTATGATTTTAAAACATTCGTATGAAAACATTGTACAATGTAATATGCTCAACTTTCTCAATTT AAAAATACCAGAACATACACTTT

MGSLKEELLKAIWHAFTALDQDHSGKVSKSQLKVLSHNLCTVLKVPHDPVALEEHFRDDDEGPVSNQGYMPYLNR FILEKVQDNFDKIEFNRMCWTLCVKKNLTKNPLLITEEDAFKIWVIFNFLSEDKYPLIIVSEEIEYLLKKLTEAM GGGWQQEQFEHYKINFDDSKNGLSAWELIELIGNGQFSKGMDRQTVSMAINEVFNELILDVLKQGYMMKKGHRRK NWTERWFVLKPNIISYYVSEDLKDKKGDILLDENCCVESLPDKDGKKCLFLVKCFDKTFEISASDKKKKQEWIQA IHSTIHLLKLGSPPPHKEARQRRKELRKKQLAEQEELERQMKELQAANESKQQELEAVRKKLEEAASRAAEEEKK RLQTQVELQARFSTELEREKLIRQQMEEQVAQKSSELEQYLQRVRELEDMYLKLQEALEDERQARQDEETVRKLQ ARLLEEESSKRAELEKWHLEQQQAIQTTEAEKQELENQRVLKEQALQEAMEQLEQLELERKQALEQYEEVKKKLE MATNKTKSWKDKVAHHEGLIRLIEPGSKNPHLITNWGPAAFTEAELEEREKNWKEKKTTE

3433/6881 FIGURE 3163A

CAGCAGTGAGTCGGAGCTCTATGGAGGTGGCAGCGGGTACCGAGTGGCGGCTGCAGCAGCGACTCCTCTGAGCTG CCTTCCCTATCCCCGACGACCGGATCCTGAGGAGGCAGCTGCGGTGGCAGCTGCTGAGTTCTCGGTGAAGGTATT TCATTTCTCCTGTCCCCTCCCCTCCCCACCCCATCTATTAATATTATTCTTTTGAAGATTCTTCGTTGTCAAGCC GGTGCACCTCAGCACTATCCCAAGACTGCTGGCAACAGCGAGTTCCTGGGGAAAACCCCAGGGCAAAACGCTCAG AAATGGATTCCTGCACGAAGCACTAGACGAGATGACAACTCCGCAGCAAACAACTCCGCAAACGAAAAAAGAACGA CATGATGCAATCTTCAGGAAAGTAAGAGGCATACTAAATAAGCTTACTCCTGAAAAGTTTGACAAGCTATGCCTT GAGCTCCTCAATGTGGGTGTAGAGTCTAAACTCATCCTTAAAGGGGTCATACTGCTGATTGTGGACAAAGCCCTA GAAGAGCCAAAGTATAGCTCACTGTATGCTCAGCTATGTCTGCGATTGGCAGAAGATGCACCAAACTTTGATGGC CCAGCAGCAGAGGGTCAACCAGGACAGAAGCAAAGCACCACATTCAGACGCCTCCTAATTTCCAAATTACAAGAT GAATTTGAAAACCGAACTAGAAATGTTGATGTCTATGATAAGCGTGAAAATCCCCTCCTCCCCGAGGAGGAGGAAA CAGAGAGCCATTGCTAAGATCAAGATGTTGGGAAACATCAAATTCATTGGAGAGCTTGGCAAGCTTGATCTTATT CACGAATCTATCCTTCATAAGTGCATCAAAACACTTTTGGAAAAGAAGAAGAAGAGACTCCAACTCAAAGATATGGGA GAGGATTTGGAGTGCCTCTGTCAGATAATGAGGACAGTGGGACCTAGATTAGACCATGAACGAGCCAAGTCCTTA CAGGATACCGTAGAGTTGCGAGAACACCATTGGGTTCCTCGCAAGGCTTTTCTTGACAATGGACCAAAGACGATC AATCAAATTCGTCAAGATGCAGTAAAAGATCTAGGGGTGTTTATTCCTGCTCCTATGGCTCAAGGGATGAGAAGT GACTTCTTTCTGGAGGGACCGTTCATGCCACCCAGGATGAAAATGGATAGGGACCCACTTGGAGGACTTGCTGAT GGACGTCATCGTTCAAATCAACTCTTCAATGGCCATGGGGGACACATCATGCCTCCCACACAATCGCAGTTTGGA GAGATGGGAGGCAAGTTTATGAAAAGCCAGGGGCTAAGCCAGCTCTACCATAACCAGAGTCAGGGACTCTTATCC CAGCTGCAAGGACAGTCGAAGGATATGCCACCTCGGTTTTCTAAGAAAGGACAGCTTAATGCAGATGAGATTAGC CTGAGGCCTGCTCAGTCGTTCCTAATGAATAAAAATCAAGTGCCAAAGCTTCAGCCCCAGATAACTATGATTCCT GAAACTGTTGTGACTGAATATCTAAATAGTGGAAATGCAAATGAGGCTGTCAATGGTGTAAGAGAAATGAGGGCT AAAGCAAGTTCTTTGATCAGTTTACTCAAACAGGAAGGGATAGCCACAAGTGACAACTTCATGCAGGCTTTCCTG AATGTATTGGACCAGTGTCCCAAACTGGAGGTTGACATCCCTTTGGTGAAATCCTATTTAGCACAGTTTGCAGCT CGTGCCATCATTTCAGAGCTGGTGAGCATTTCAGAACTAGCTCAACCACTAGAAAGTGGCACCCATTTTCCTCTC TTCCTACTTTGTCTTCAGCAGTTAGCTAAATTACAAGATCGAGAATGGTTAACAGAACTTTTTCAACAAAGCAAG ACCATATATAAATGGATTAAAGATAACATCTCCCCAAACTTCATGTAGATAAAGGATTTGTGAACATCTTAATG ACTAGCTTCTTACAGTACATTTCTAGTGAAGTAAACCCCCCCAGCGATGAAACAGATTCATCCTCTCCTTCC AAAGAACAGTTAGAGCAGGAAAAACAACTACTACTATCTTTCAAGCCAGTAATGCAGAAATTTCTTCATGATCAC GTTGATCTACAAGTCAGTGCCCTGTATGCTCTCCAGGTGCACTGCTATAACAGCAACTTCCCAAAAGGCATGTTA CTTCGCTTTTTTGTGCACTTCTATGACATGGAAATTATTGAAGAAGAAGCTTTCTTGGCTTGGAAAGAAGATATA ACCCAAGAGTTTCCGGGAAAAGGCAAGGCTTTGTTCCAGGTGAATCAGTGGCTAACCTGGTTAGAAACTGCTGAA GAAGAAGAATCAGAGGAAGAAGCTGAC<u>TAA</u>AGAACCAGCCAAAGCCTTAAATTGTGCAAAACATACTGTTGCTAT CACGTCAGTTAGGATTTCCTTCTGCATAAGGTTTTTTTGTAGTGTAATGTCTTAATCATAGTCTACCATCAAATA TTTTAGGAGTATCTTTAATGTTTAGATAGTATATTAGCAGCATGCAATAATTACATCATAAGTTCTCAAGCAGAG GCAGTCTATTGCAAGGACCTTCTTTGCTGCCAGTTATCATAGGCTGTTTTAAGTTAGAAAACTGAATAGCAACAC TGAATACTGTAGAAATGCACTTTGCTCAGTAATACTTGAGTTGTTGCAATATTTGATTATCCATTTGGTTGTTAC AGAAAAATTCTTAACTGTAATTGATGGTTGTTGCCGTAATAGTATATTGCCTGTATTTCTACCTCTAGTAATGGG CTTTATGTGCTAGATTTTAATATCCTTGAGCCTGGGCAAGTGCACAAGTCTTTTTAAAAGAAACATGGTTTACTT

WO 2004/030615 PCT/US2003/028547

3434/6881 FIGURE 3163B

VESAIAEGGASRFSASSGGGGSRGAPQHYPKTAGNSEFLGKTPGQNAQKWIPARSTRRDDNSAANNSANEKERHD AIFRKVRGILNKLTPEKFDKLCLELLNVGVESKLILKGVILLIVDKALEEPKYSSLYAQLCLRLAEDAPNFDGPA AEGQPGQKQSTTFRRLLISKLQDEFENRTRNVDVYDKRENPLLPEEEEQRAIAKIKMLGNIKFIGELGKLDLIHE SILHKCIKTLLEKKKRVQLKDMGEDLECLCQIMRTVGPRLDHERAKSLMDQYFARMCSLMLSKELPARIRFLLQD TVELREHHWVPRKAFLDNGPKTINQIRQDAVKDLGVFIPAPMAQGMRSDFFLEGPFMPPRMKMDRDPLGGLADMF GQMPGSGIGTGPGVIQDRFSPTMGRHRSNQLFNGHGGHIMPPTQSQFGEMGGKFMKSQGLSQLYHNQSQGLLSQL QGQSKDMPPRFSKKGQLNADEISLRPAQSFLMNKNQVPKLQPQITMIPPSAQPPRTQTPPLGQTPQLGLKTNPPL IQEKPAKTSKKPPPSKEELLKLTETVVTEYLNSGNANEAVNGVREMRAPKHFLPEMLSKVIILSLDRSDEDKEKA SSLISLLKQEGIATSDNFMQAFLNVLDQCPKLEVDIPLVKSYLAQFAARAIISELVSISELAQPLESGTHFPLFL LCLQQLAKLQDREWLTELFQQSKVNMQKMLPEIDQNKDRMLEILEGKGLSFLFPLLKLEKELLKQIKLDPSPQTI YKWIKDNISPKLHVDKGFVNILMTSFLQYISSEVNPPSDETDSSSAPSKEQLEQEKQLLLSFKPVMQKFLHDHVD LQVSALYALQVHCYNSNFPKGMLLRFFVHFYDMEIIEEEAFLAWKEDITQEFPGKGKALFQVNQWLTWLETAEEE ESEEEAD

AGCTCTTTGTTCTCCAAGCAGGAAGGCGGCCTCCTGCCCACCCGCCTCCAAGCGGGCCCCCTCCTGCACCAT AAATCCCCCCGGGACTGACAACCGCCTCGCCACGGCCTCCTCTGCTGACAAAAGGGGCAGAAATCATCACTCTCT CTTTCCTCCCCGACGAAGGGCAGCCCCTGCCGACTCCAGGTCCTACACACCTCCCGGCGGGAGGCCAGGCTCCG GGACGCCTGCGGTTCCCTGGTCCCGCGCCAACGGCCTGGCCTTCCCTGCCGGCCCGCGTGCCTCCCGCCACGGCG CTAGCGGTCCGAGCCACGCTCCCTCGCCGTCCGAGCACAGCCGTGCCTCGGTCCGCCACGGCCTCGTCCCTGCAG GCGTCGGCCATCCGGCCATGACCGCACGCGGCCTGGCCAACACTGACGTTTTCCTTCTACTCCGTCAGCAACAC GAAGAGAGAACAAAAGCCAAGACTTTCCAGGTATCTGAAGCGCAGAGGAAATGCTAAAAAAAGGGTCGCCCCACCC GGCTCCGCCTGCGGCCGCCATTTTGTACCACTCGAGAAGAAGCGACCAGGGACGGCCGCCATTTTAGAGCGCTCC ACTCGGCGGCGGCAGCGGCTCAACTCACCTTCACCGAGAACTCAGCAGCTGCCACCGCAGCTGCCTCAGGAT GGAGTCGGGGACGGCCTCAAACTCAGCTCAGAGGAGTCGCTGCTGCAGCCGCCACTCGGTACCCGCTGCCACCTC CATAGAGCTCCGACTCACTGCTGGCGCTAAGGCGTGTCTGAAGCCGAACTTATCACTCTTGGGGCAGCCGAACCC ACCAGAGTCTCCCCGAATGGCTCCTTCGCCGCCCAATCAGCGGCCCGGTTGCCGTCTGCCACCAATCCGCGCAGG GCAGCGAGGAGGAGCCACAGGGCTGAGCTCGGTTGCGGCGCAGCCCCGCCGCAGTGCGCAAAGCCATATTCGCGA $\mathtt{AGTCTCTGAGGCTGAGCCAGTGGCGTAAGGGGCGCCGAGCGCTGTCGAG}$ GAGCCCTTTTGAGTCTGCGTTGGCGTGGCTGCTTCTTGCTCCAGTCCCTTTGTTCACTGAGTCCATATGCCA TGCTCCAGTTGTATCATCCCCTTTTCCCTCGACCTCGTTTTCTCACCGGGAATATGGGAAGAAAACGCACCCTTA GGCTCCAGGTCCTCGGCTTCGGCAGCCTTAGGGAACCCAGAAAGTAGTGGGGAGGAGGCGAGACGTGCGCCCGGA TGCCAAAGGGGAGCTTCATTCAGCTCCTTATTGGCCCACCCCTGCAGAGTGAATGAGAAAGTGATGAAAGGAAG GGGTTGATTTTCTTCGAACCGCACAGAAGAAGCTGCTTTTCCCATAGGAATGTCCGGCTGGCGGTCACCGAGGAA GTTTGTTTAAGTGCACGTTAAACATTGTCAGTTGTGTATTTTCATTTTAATGTAAGCATCACCATAAGAAATAGGA TTAAGCTTTTCAAAGCCGGCAAGTTGAACTATTTATACTTACCAGGTAATGTATTGATGAGTACCTTATTCCATC GTTTGCGACATTGTAGCTATACTAAAATGGAGTCATACTTCCATAAACTTAAACAACAAAAATGTCCCCATCTCC AGTGTTCAGTAAGAGGCAGGATTTTCAAAGACCCAAACTTAACCTTTGATGTGTCAAAACAGCTCTTGGTATTAG AGCACCTGGTCCTTAATACAATTTTCCGGAAAATTGC

MRVACVKPESPFESALAWLLLLAPVPLFTESICHAPVVSSPFPSTSFSHREYGKKTHPYLPRTLCVASEHCFSWR PLELWLPSRAWPLPGLSPSG

GGACTGAAAGAGAAGGACGAGGTCATCTTCGGACGGGAGGGGCAAGCCATCCTGGGACCCCAGGCGTGCAG GTTCTCTTTGAGGGTATTCCACCCTGCAAAAAGCATGTATTCATGGTCAGCTCTCAGCAAGGCCAGTAGCAGAGT GGTAAAGGCCTTGGCCCTCCAAGGCTGGGAAAAGACAATGACAAGTCAAATCCAGACCTATGTTGTTGTTGGTC ${\tt TACTAGGTGACTGTCTCCTGGAAATGTTATGCAGCTCAGCAAGGTGAAGTTTCGAAATCAGTATGACAATGATGT}$ CACTGTTTGGAGCCCCCAGGGCAGGATTCATCAAATTGAATATGCAATGGAAGCTGTTAAACAAGGTTCAGCCAC AGTTGGTCTGAAATCAAAAACTCATGCAGTTTTGGTTGCATTGAAAAGGGCGCAATCAGAGCTTGCAGCTCATCA GAAAAAAATTCTCCATGTTGACAACCATATTGGTATCTCAATTGCGGGGCTTACTGCTGATGCTAGACTGTTATG TAATTTTATGCGTCAGGAGTGTTTGGATTCCAGATTTGTATTCGATAGACCACTGCCTGTGTCTCGTCTTGTATC TCTAATTGGAAGCAAGACCCAGATACCAACACAACGATATGGCCGGAGACCATATGGTGTTGGTCTCCTTATTGC TGGTTATGATATGGGCCCTCACATTTTCCAAACCTGTCCATCTGCTAACTATTTTGACTGCAGAGCCATGTC CATTGGAGCCCGTTCCCAATCAGCTCGTACTTACTTGGAGAGACATATGTCTGAATTTATGGAGTGTAATTTAAA TGAACTAGTTAAACATGGTCTGCGTGCCTTAAGAGAGACGCTTCCTGCAGAACAGGACCTGACTACAAAGAATGT TTCCATTGGAATTGTTGGTAAAGACTTGGAGTTTACAATCTATGATGATGATGTGTCTCCATTCCTGGAAGG TCTTGAAGAAAGACCACAGAGAAAAGGCACAGCCTGCTCAACCTGCTGATGAACCTGCAGAAAAGGCTGATGAACC AATGGAACATTAAGTGATAAGCCAGTCTATATATGTATTATCAAATATGTAAGAATACAGGCACCACATACTGAT GACAATAATCTATACTTTGAACCAAAAGTTGCAGAGTGGTGGAATGCTATGTTTTAGGAATCAG

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GGTCGGCGTGGTCTTGCGAGTGGAGTGTCCGCTGTGCCCGGGCCTGCACCATGAGCGTCCCGGCCTTCATCGACA TCAGTGAAGAAGATCAGGCTGCTGAGCTTCGTGCTTATCTGAAATCTAAAGGAGCTGAGATTTCAGAAGAAGAACT CGGAAGGTGGACTTCATGTTGATTTAGCTCAAATTATTGAAGCCTGTGATGTGTGTCTGAAGGAGGATGATAAAG AAAGCCTATGTGAAAAGCTGGTCAAATTTCGCGAAGGTGAACGCCCGTCTCTGAGACTGCAGTTGTTAAGCAACC TTTTCCACGGGATGGATAAGAATACTCCTGTAAGATACACAGTGTATTGCAGCCTTATTAAAGTGGCAGCATCTT GTGGGGCCATCCAGTACATCCCAACTGAGCTGGATCAAGTTAGAAAATGGATTTCTGACTGGAATCTCACCACTG AAAAAAGCACACCCTTTTAAGACTACTTTATGAGGCACTTGTGGATTGTAAGAAGAGTGATGCTGCTTCAAAAG TCATGGTGGAATTGCTCGGAAGTTACACAGAGGACAATGCTTCCCAGGCTCGAGTTGATGCCCACAGGTGTATTG TACGAGCATTGAAAGATCCAAATGCATTTCTTTTTGACCACCTTCTTACTTTAAAACCAGTCAAGTTTTTGGAAG GCGAGCTTATTCATGATCTTTTAACCATTTTTGTGAGTGCTAAATTGGCATCATATGTCAAGTTTTATCAGAATA ATAAAGACTTCATTGATTCACTTGGCCTGTTACATGAACAGAATATGGCAAAAATGAGACTACTTTATTGG GAATGGCAGTAGAAAATAAGGAAATTTCTTTTGACACAATGCAGCAAGAACTTCAGATTGGAGCTGATGATGTTG AAGCATTTGTTATTGACGCCGTAAGAACTAAAATGGTCTACTGCAAAATTGATCAGACCCAGAGAAAAGTAGTTG TCAGTCATAGCACACATCGGACATTTGGAAAACAGCAGTGGCAACAACTGTATGACACACTTAATGCCTGGAAAC AAAATCTGAACAAAGTGAAAAACAGCCTTTTGAGTCTTTCTGATACC**TGA**GTTTTTATGCTTATAATTTTTGTTC TTTGAAAAAAAGCCCTAAATCATAGTAAAACATTATAAACTAAAAAA

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ACTTGAGGGAGTAGGGGCCCGGGTTTGGGCCCTCAGTTGCTAAGGGCTACCCGAGTGGGAAGCGGTTCAAGAGAT GGGGTGAAGGGTGGTTCACCGGTTCTTCAAGTCCTCAGCCTTCTGGCCCGCGGAAGTTAAGCAACCAAGAGGCGG ${\tt GGCCGCCACGGCCCAGCTGGAGACAGCAGTGCGGGGCTTCAGTTACCTGCTGGCAGGTCGATTCGCCATTCGCA}$ CGAGCTGTCAGAGCTGGTGTACTCTGCCTCTAACCTGCTTGTGCTGCTCAATGACGGGATCCTACGGAAGGAGCT TCGGAAAAAGTTGCCTGTCGCTGTCCCAGCAGAAGCTGCTGACATGGCTGAGCGTGCTGGAGTGCGTGGAGGT GTTCATGGAGATGGGAGCTGCCAAGGTGTGGGGTGAAGTGGGCCGCTGGCTTGTCATCGCCCTCATCCAGCTGGC CAAGGCTGTACTGCGGATGCTCCTGCTCTGGTTCAAGGCTGGCCTCCAGACTTCACCCCCTATCGTTCCACT GGACAGAGAGCCCAGGCACAGCCCCGGATGGTGACCACAGCCCTGGCAACCATGAGCAGTCCTACGTGGGGAA GCGGTCAAACCGGGTGGTGCGAACCCTCCAGAACACGCCGTCCCTGCACTCCAGGCACTGGGGAGCTCCCCAGCA GCGGGAGGGACGCAGCAGCAGCATCACGAGGAGCTGAGTGCGACCCCCACCCCCTGGGGCTGCAGGAGACCAT CGCAGAGTTTTTGTACATTGCCCGGCCGCTGCTGCACTTGCTCAGCCTGGGCCTGTGGGGTCAGAGGTCGTGGAA ACCCTGGCTCTTGGCTGGTGTTGTGGACGTGACCAGCCTGAGCCTCCTGAGTGACAGAAAGGGCCTGACCCGGAG GGAGCGGCGGGAGCTGCGGACCATCCTGCTGCTCTACTACCTGCTGCGCTCTCCTTTCTACGACCGCTT CTCCGAGGCCAGGATCCTCTTCCTGCTCCAGTTGCTGGCCGACCACGTCCCTGGCGTTGGCCTGGTCACAACGTC ACACCCT TGA CTGCGCTCTCCTGTGACGATGCCACTGCAGCCCGCACCTTGTCACTGCTGGGCCAAGAAGCCTTC ACTAGGAGTGGGATCCAGGCTCCTCCCCACAGAAAGCGGTGACTTCACCTCATGGAGCCCGGGAAGCTGCTTGC CTCGGCAGCCATAGGAGCGAACACTGCTGCTCTCTCGCTGGCCCCTGGTGAGGACAGGAAGCCTGAACCCGGGTG ATGGCTGAACGCTGCCCAGCGTGTCTTCTGGCTGGGGCCCTCCGTCTGCCCCTTCTCCGCAGGGCCCTGTGGCTC TGGCAGCCCCAGGCCATGGCGTTGCCAGCCTCCCTGTGACAGAGCCTGGTGAACAGTGAGCCTGGCTCCCACGCA

MEKLRLLGLRYQEYVTRHPAATAQLETAVRGFSYLLAGRFADSHELSELVYSASNLLVLLNDGILRKELRKKLPV SLSQQKLLTWLSVLECVEVFMEMGAAKVWGEVGRWLVIALIQLAKAVLRMLLLLWFKAGLQTSPPIVPLDRETQA QPPDGDHSPGNHEQSYVGKRSNRVVRTLQNTPSLHSRHWGAPQQREGRQQQHHEELSATPTPLGLQETIAEFLYI ARPLLHLLSLGLWGQRSWKPWLLAGVVDVTSLSLLSDRKGLTRRERRELRRRTILLLYYLLRSPFYDRFSEARIL FLLQLLADHVPGVGLVTTSQRAASPCLPARPHTQPWSPPAFLPGHP

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GGGGTGAAGGGTGGTTCACCGGTTCTTCAAGTCCTCAGCCTTCTGGCCCGCGGAAGTTAAGCAACCAAGAGGCGG ${\tt TGTCGGTGCCGAGGGCAGGATGGAGAAGCTGCGGCTCCTGGGCCTCCGCTACCAGGAGTACGTGACTCGTCACCC}$ CGAGCTGTCAGAGCTGGTGTACTCTGCCTCTAACCTGCTTGTGCTGCTCAATGACGGGATCCTACGGAAGGAGCT TCGGAAAAAGTTGCCTGTCTCGCTGTCCCAGCAGAAGCTGCTGACATGGCTGAGCGTGCTGGAGTGCGTGGAGGT GTTCATGGAGATGGGAGCTGCCAAGGTGTGGGGTGAAGTGGGCCGCTGGCTTGTCATCGCCCTCATCCAGCTGGC ${\tt CAAGGCTGTACTGCGGATGCTCCTGCTCTGGTTCAAGGCTGGCCTCCAGACTTCACCCCCTATCGTTCCACT}$ GGACAGAGAGACCCAGGCACAGCCCCGGATGGTGACCACAGCCCTGGCAACCATGAGCAGTCCTACGTGGGGAA GCGGTCAAACCGGGTGGTGCGAACCCTCCAGAACACGCCGTCCCTGCACTCCAGGCACTGGGGAGCTCCCCAGCA GCGGGAGGGACGCAGCAGCAGCATCACGAGGAGCTGAGTGCGACCCCCACCCCCTGGGGCTGCAGGAGACCAT CGCAGAGTTTTTGTACATTGCCCGGCCGCTGCTGCACTTGCTCAGCCTGGGCCTGTGGGGTCAGAGGTCGTGGAA ACCCTGGCTCTTGGCTGGTGTTGTGGACGTGACCAGCCTGAGCCTCCTGAGTGACAGAAAGGGCCTGACCCGGAG GGAGCGGCGGGAGCTGCCGGACCATCCTGCTGCTCTACTACCTGCTGCGCTCTCCTTTCTACGACCGCTT $\texttt{GCTCATGGATTACTTGCCCACCTGGCAGAAAATCTACTTCTACAGTTGGGGC\underline{\textbf{TGA}}\texttt{CAGACCTCCCGGAAGGAGGG}$ AAAAAAAAAA

MEKLRLLGLRYQEYVTRHPAATAQLETAVRGFSYLLAGRFADSHELSELVYSASNLLVLLNDGILRKELRKKLPV SLSQQKLLTWLSVLECVEVFMEMGAAKVWGEVGRWLVIALIQLAKAVLRMLLLLWFKAGLQTSPPIVPLDRETQA QPPDGDHSPGNHEQSYVGKRSNRVVRTLQNTPSLHSRHWGAPQQREGRQQQHHEELSATPTPLGLQETIAEFLYI ARPLLHLLSLGLWGQRSWKPWLLAGVVDVTSLSLLSDRKGLTRRERRELRRRTILLLYYLLRSPFYDRFSEARIL FLLQLLADHVPGVGLVTRPLMDYLPTWQKIYFYSWG

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AAGAAAAATTCAAAGTGGAGACAAGAACCATTGCTGTTGACTTTGCATCAGAAGATATTTATGATAAAATTAAAA CAGGCTTGGCTGGTCTTGAAATCGGCATCTTAGTGAACAACGTGGGAATGTCGTATGAGTATCCTGAATACTTTT TGGATGTTCCTGACTTGGACAATGTGATCAAGAAAATGATAAATATTAATATTCTTTTCTGTTTGTAAGATGACAC AATTGGTACTGCCTGGCATGGTGGAAAGATCCAAAGGGGCTATTCTGAACATTTCATCTGGCAGTGGCATGCTCC CTGTCCCACTCTTGACCATCTATTCTGCAACCAAGACTTTTGTAGATTTCTTCTCTCAGTGCCTCCATGAGGAGT ATAGGAGCAAGGCCTCTTTGTGCAGAGTGTCCTGCCATACTTCGTAGCTACAAAACTGGCTAAAATCCGGAAGC CAACTTTGGATAAGCCCTCTCCGGAGACGTTTGTGAAGTCTGCAATTAAAACAGTCGGCCTGCAATCCCGAACCA TGAATATGAACAAGTCTACACGGGCTCACTATCTGAAGAAAACCAAGAAGAACTAAGCATTGATAACTGCATTGT AACTTGGCCAGATGCTCCAGCATATGCACGTTCACTGCAAAGCACCCTACTGGTTTTGAAAATCTGACCTTGTCA CATATATTCTGGATACTATCCGAGGTAATTTTGAAGTTTAATATAAATGCTCATATCAAATGAATATAGAACTAA TATTGTCGGGAACACCTAATAGAAAGGAATACTATTATAGCAAATCACAGAATGATAGACTCAAGCATAAAACTT GGCAGTTTTATCTGCTTCAAAATGCCATTGATCATTATTCCTGTATTTTCTCTGAAACTGATTATAAAAACCAAT GTCCAGCTACTCTTTTGTTTTTGACACTTGAAGAAATGGAGATCGATTTGATTTGTTTATAAGCAGACACACTGC AATTTACAAAGATCTCTTTACGGTTTTATAAAATTATCTTCCAGTTTGTACATTTATATGGAATTGTTCTTTATC AAGGGTAGCTAATGACATGAAAATAATTGTGAAATATGGAATTATTTCTGACACATGAAGCCCACTAAACTATGC AAATGGGCCAAAGTGTACATTGAGACTGGCAGCCATCTATGGTACCACTGAAACCCTGACCCAGAAAAGTGGCTT GCTTGGACACCCAGCTGCCTTTGTTTCTGCATTAAACCAATATTGATCACACATATGACACAGGCTAGTCCTATA AAAGTAATGACTTCATAGAAATGGCATTATAATTTTTTAAGTTGATACTCTACAGGTAGCTATTGATATAATTAGT TTTAATAAAACATGCTGCAACCATGGTATACAACAAAAATACATTTCTTTGGTGATTGAAATTAAGGCCGTATTT TACTGTGAAATATGCAGCAAGAAGATTGGTCTTTACCTAGGCTGTGTTTCCTAAGCTCTGAGTTTTCAGCACCAG TAGATTTGTATTAAAAGAAAAAAAATGGGGCCTTAGCTTCTGGCTTTTAATTTTTGCCAGCTAAGGACATAAAAC AAAAATAAACAAACAAAAAAAAATAGCCATCTGCTATCAGCATCATTATGTAAAAGAAAATATATTTTAGCCCCT

CCCCGCCGTTTGCCAGCGCTCAGGCAGGAGCTCTGGACTGGGCGCGCCGCCCTGGAGTGAGGGAAGCCCAG TGGAAGGGGGTCCCGGGAGCCGGCTGCGATGGACGCCGTCTTGGAACCCTTCCCGGCCGACAGGCTGTTCCCCGG ATCCAGCTTCCTGGACTTGGGGGATCTGAACGAGTCGGACTTCCTCAACAATGCGCACTTTCCTGAGCACCTGGA CCACTTTACGGAGAACATGGAGGACTTCTCCAATGACCTGTTCAGCAGCTTCTTTGATGACCCTGTGCTGGATGA GAAGAGCCCTCTATTGGACATGGAACTGGACTCCCCTACGCCAGGCATCCAGGCGGAGCACAGCTACTCCCTGAG CGGCGACTCAGCGCCCCAGAGCCCCCTTGTGCCCATCAAGATGGAGGACACCACCCAAGATGCAGAGCATGGAGC ATGGGCGCTGGGACACAAACTGTGCTCCATCATGGTGAAGCAGGAGCCGGAGCCGGAGCTGCCCGTGGACCCTCT GGCTGCCCCTCGGGCCATGGCTGCCGCGCCCCATGGCCACCACCCCGCTGCTGGGCCTCAGCCCCTTGTCC AGGCTGCCCATCCCCCACCAGGCCCCGGGAGAGATGACTCAGCTGCCAGTGATCAAAGCAGAGCCTCTGGAGGTG AACCAGTTCCTCAAAGTGACACCGGAGGACCTGGTGCAGATGCCTCCGACGCCCCCAGCAGCCATGGCAGTGAC AGCGACGGCTCCCAGAGTCCCCGCTCTCTGCCCCCCTCCAGCCCTGTCAGGCCCATGGCGCGCTCCTCCACGGCC ATCTCCACCTCCCCACTCCTCACTGCCCCTCACAAATTACAGGGGACATCAGGGCCACTGCTCCTGACAGAGGAG GAGAAGCGGACCCTGATTGCTGAGGGCTACCCCATCCCCACAAAACTCCCCCTCACCAAAGCCGAGGAGAAGGCC TTGAAGAGTCCGGAGGAAAATCAAGAACAAGATCTCAGCCCAGGAGAGCCGTCGTAAGAAGAAGAAGGAGTATGTG GAGTGTCTAGAAAAGAAGGTGGAGACATTTACATCTGAGAACAATGAACTGTGGAAGAAGGTGGAGACCCTGGAG AATGCCAACAGGACCCTGCTCCAGCAGCTGCAGAAACTCCAGACTCTGGTCACCAACAAGATCTCCAGACCTTAC XXXXXXXXXXTGCCCTCCGAAGCCTCCTATTCTACGATGACGGGGCAGGCTTATGGGAAGATGGCCGCAGC ACCCTGCTGCCCATGGAGCCCCCAGATGGCTGGGAAATCAACCCCGGGGGCCCGGCAGAGCAGCGCCCCGGGAC GGAAACGCCACCCCGACTTCTCCCACTCCAAGGAGTGGTTCCACGACAGGGATCTGGGCCCCAACACCACC CACTAACCCGGATCCGCCTCGTGCCCTCCTGGAGCTTCCCATTCCAGGAGAAAAGGCTCCACTTCCCAGC CCTTCCTTGCCCCTGACATTTGGACTCTTCCCTTGGGCCGACCACTCTGTTCTCATTCTCCTTCCCACCAACATC CATCCGTCCTTCTCAGACAACCACTCACTGGGTACCCCACCTCCTCTCATATGCCCAACACGACCACTGCCT CCCTGCCCCACACCTGCACCCAAACAGACACATCAACGCACCCCACTCACAGACACCCCTTACCCCACCCCAC TGTACAGAGACCAAGAACAGAAATTGTTTGTAAATAATGAACCTTATTTTTTATTATTGCCAATCCCCTAAGATA TGCTCCCTGGCCCAGGAAAGAGGGACTCCCTGACCCTCACCTGGCACCCCCTGCTGCTGCCCAAGCCGCTGGGC AAAGAGGCAGCATC

TTTTCATTTAAATATTCTTCTTTTTGCTTCTTTAAGCAGAAGCTGGTCTCTGCTTTTCACCACCTGGAATCCCAG TCCCAACAGCTGCTCTTCTAACCCTTCCGGCCTAATTGTGGAATAATCGTTTAAATCATTAAGAGACAGAATCTG ATGTTGGTAGCTCTGACAGACCTCTCTAGCTTCTTTCATAAGCCAGGGCTCTTGCCCAGCTCCTGCACACAGCCT GCCAGTTCTCCATCTTAGCACAGTTCCACTTTTCCATAGTAGCCAGAAACATCTGGCTGAAGACAAACAGTTACA AAGCAGAAGCCAAGGTGATGGGATCTGTTGTCACATATGGGGCTGGCAGCTCAAGGAATGTGGTTCTCTGCTGAG GAGATGTGGTAATCCAGTCAGCCCCTGGCTGTCCTGCCAAGGGTCTCAAGGCAGCTAGCCAGCAGCTGCATGCTT GGTGACTGGAGCTACTACTGCCAGGCTGCCTGGTGAACCTTTTTTGATTCTCAGTAGGTACCATCTGCCACC AAGCACTAAGAAAGGGAGCTGAAGTACCTAGAAAGTTCCCATTTGGGAAGTGTTCCTGTCACCCAAGAGACAGGA TCAAGGCATCTCAACAAGGTTTAGGTCAACCAAGTGTCCACCCAGTCTGACTTTAAACCCCCATGCTACAGAAAG GTTTCTGGTTTTCCAGGTCTTGGTTGCCCCTTACGTCCAAAGGCACCAGATCACTCAGCAAAATGTCCCTGAATTC AGTGATTGGTGGAAGGGAAGACACCAGCTTTTTTGGATAGCTGTGCTGTATCACCGTTTAAGGCAAGAAGTGAAT TTTTGTCTGAGAACAGGGACAAGGGTTTAATGGGACAGTACAGCATCTCCCTCTTTGCACAGGTAAGTATAGGT GGGTGTCTCCATCTCTAATGTCAAGCTCTGACCATAAAGGAATGCTTTAGTGGGTAATGGGCCTGTCCTAGAGCT TTGCTACCCAGAATTCCCCTTCTGTCTGGTGTTACCTCTTGGAATTCACTGTGGTAATGTTCAGAGAGGCAAATG CTCTCCCCAAGAGATGATCTCTGACACAATCCCATATGAAAACTCTTCTGAAAAATGAATTGCTAATTGCTATTAG CCTTGATGCACTTACTCTAAGCAGTTCTTCAGACTTCTGGATCAGTGCTTCTCAAACTGTGGTTCTTGGACAACT TACAGTAGAACTACATGGGTCCTTATTAAAATACAGATCCATTTCAGACCTAAAATCAGAATAAGAATGGGAGTC AGAGGGACCCAGGATTAGTATTTTTAAAACAAGATTTCTTCATTTTAGGTGTCTGCCCTCAGCCTCCAGCAAG GCAGAGTCAGTCTCAGGTCTACTTGCCATTGTGGTTTTTGTGCATGGTGCTTTGATTCTTTGCTAATTATGTTGCA GGCACAGTGGTGTTTGTCTTCTGTTTCCTACCAAACTCAGCTTTTTTGGCTGTCTGCGCCTCACCTCCCATCTTT TCTAGGCTGTTGCTGCTTTCCAGGTTTCTCCCTTGAATAGCTGTATGTGCTGGAGTCTTTTCTTTATGTTGAATC ATTTTAATTTTTGTCCTTATTTCTAGGATCTAGGGTCCTTTTGATCTTTCCCTTCTCTGTTTATCGTGCTAGTCC TGCTGAATTCTCAAAACACTAAACTGCCTGTGTTCCCTCTCGGCTTTCATTTTCTAATTGGAACCAGGCACAGTA TTGTAACAGAGAACTGCAATTAATTTTCTAAAATAGTGGCAACTTGCACAGTATAATAACTTTGGTTGTAACCAA GTGAAAGCATAATAACAAAAATAACAAAATTACTGATGAAACCAGAAAGAGTCATATACCACATTCTTCCTTTAGT TTGTATCTCAGTAAGTGCTGTGTTACTTAGGAATAGGGGCAGAAGCCTGCAACTGGGCAGGAGGTTCAGGGACA TGAGGACGAAGCTAGGGCATTTTGAGCTAGAAAGCAAGAATAAGGATTAGTGCTTTCAACACTGGAATTAACATG GACCACCCCCCCCCCAATAAGTGGGGATTGTAGGCACATAAGTGGTTTAGTAAGAAGTGGAAAAGGTTTTT CTGTGGAGTTCGAGTTCCATCGGCTCCCATCCGGCTATCCTGCCACCTTAGCGGCTGCTCCTCCCCAGGATGCG GGCAGGGGGCCTCTCTCCCACTCCCCACACCCGATTTCTGAGTAGCGATAGGGGCTTGGAGGCTTATTTTATGGG AAGGATGTCCACATGCCTAAGCACCCGGAGCTGGCAGACAAGAATGTGCCCAACCTTCATGTCATGAAGGCCATG CAGTCTCTCAAGTCCCGAGGCTACGTGAAGGAACAGTTTGCCTGGAGACATTTCTACTGGTACCTTACCAATGAG GAGACTGGCAGGCCTCGGCCTAAAGGTCTGGAGGGTGAGCGACCTGCGAGACTCACAAGAGGGGAAGCTGACAGA GATACCTACAGACGGAGTGCTGTGCCACCTGGTGCCGACAAGAAAGCCGAGGCTGGGGCTGGGTCAGCAACCGAA TTCCAGTTTAGAGGCGGATTTGGTCGTGGACGTGGTCAGCCACCTCAGTAAAATTGGAGAGGATTCTTTTGCATT GAATAAACTTATAGCCAAAAAACCTT

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3466/6881 FIGURE 3195

GGGCTAGGGCCGGATGGAGCCGCGGGACGGTAGCCCCGAGGCCCGGAGCAGCGACTCCGAGTCGGCTTCCGCCTC CCCTGGGGCCCCGTGCAGCGAGTCAGAGCGGCAGATCCGGAGTACAGTGGACTGGAGCGAGTCAGCGACATATGG GGAGCACATCTGGTTCGAGACCAACGTGTCCGGGGACTTCTGCTACGTTGGGGAGCAGTACTGTGTAGCCAGGAT GCTGAAGTCAGTGTCTCGAAGAAAGTGCGCAGCCTGCAAGATTGTGGTGCACACGCCCTGCATCGAGCAGCTGGA GAAGATAAATTTCCGCTGTAAGCCGTCCTTCCGTGAATCAGGCTCCAGGAATGTCCGCGAGCCAACCTTTGTACG GCACCACTGGGTACACAGACGACGCCAGGACGCCAAGTGTCGGCACTGTGGGAAGGGATTCCAGCAGAAGTTCAC CTTCCACAGCAAGGAGATTGTGGCCATCAGCTGCTCGTGGTGCAAGCAGGCATACCACAGCAAGGTGTCCTGCTT CATGCTGCAGCAGATCGAGGAGCCGTGCTCGCTGGGGGTCCACGCAGCCGTGGTCATCCCGCCCACCTGGATCCT CAAGAAAGGGCCTGAGGAGGCCGCTGGAGACCCTTCATCATCAGGCCCACCCCCTCCCCGCTCATGAAGCCCCT GCTGGTGTTTGTGAACCCCAAGAGTGGGGGCAACCAGGGTGCAAAGATCATCCAGTCTTTCCTCTGGTATCTCAA TCCCCGACAAGTCTTCGACCTGAGCCAGGGAGGGCCCCAAGGAGGCGCTGGAGATGTACCGCAAAGTGCACAACCT GCGGATCCTGGCGTGCGGGGGCGACGGCACGGTGGGCTGGATCCTCTCCACCCTGGACCAGCTACGCCTGAAGCC GCCACCCCTGTTGCCATCCTGCCCCTGGGTACTGGCAACGACTTGGCCCGAACCCTCAACTGGGGTGGGGGCTA CACAGATGAGCCTGTGTCCAAGATCCTCTCCCACGTGGAGGAGGGGAACGTGGTACAGCTGGACCGCTGGGACCT CTTCAACAACTACTTCAGCCTGGGCTTTGACGCCCACGTCACCCTGGAGTTCCACGAGTCTCGAGAGGCCAACCC AGAGAAATTCAACAGCCGCTTTCGGAATAAGATGTTCTACGCCGGGACAGCTTTCTCTGACTTCCTGATGGGCAG CTCCAAGGACCTGGCCAAGCACATCCGAGTGGTGTGTGATGGAATGGACTTGACTCCCAAGATCCAGGACCTGAA ACCCCAGTGTGTTTTCCTGAACATCCCCAGGTACTGTGCGGGCACCATGCCCTGGGGCCACCCTGGGGAGCA CCACGACTTTGAGCCCCAGCGGCATGACGACGGCTACCTCGAGGTCATTGGCTTCACCATGACGTCGTTGGCCGC GCTGCAGGTGGGCGGACACGGCGAGCGGCTGACGCAGTGTCGCGAGGTGGTGCTCACCACATCCAAGGCCATCCC GGTGCAGGTGGATGGCGAGCCCTGCAAGCTTGCAGCCTCACGCATCCGCATCGCCCTGCGCAACCAGGCCACCAT GGTGCAGAAGGCCAAGCGGCGGAGCGCCCCCCTGCACAGCGACCAGCAGCCGGTGCCAGAGCAGTTGCGCAT CCAGGTGAGTCGCGTCAGCATGCACGACTATGAGGCCCTGCACTACGACAAGGAGCAGCTCAAGGAGGCCTCTGT GCCGCTGGGCACTGTGGTGGTCCCAGGAGACAGTGACCTAGAGCTCTGCCGTGCCCACATTGAGAGACTCCAGCA GGAGCCCGATGGTGCTGGAGCCAAGTCCCCGACATGCCAGAAACTGTCCCCCAAGTGGTGCTTCCTGGACGCCAC CACTGCCAGCCGCTTCTACAGGATCGACCGAGCCCAGGAGCACCTCAACTATGTGACTGAGATCGCACAGGATGA GATTTATATCCTGGACCCTGAGCTGCTGGGGGCCATCGGCCCGGCCTGACCTCCCAACCCCCACTTCCCCTCTCCC CACCTCACCCTGCTCACCCACGCCCCGGTCACTGCAAGGGGGATGCTGCACCCCCTCAAGGTGAAGAGCTGATTGA GGCTGCCAAGAGGAACGACTTCTGTAAGCTCCAGGAGCTGCACCGAGCTGGGGGGCGACCTCATGCACCGAGACGA GCAGAGTCGCACGCTCCTGCACCACGCAGTCAGCACTGGCAGCAAGGATGTGGTCCGCTACCTGCTGGACCACGC CCCCCAGAGATCCTTGATGCGGTGGAGGAAAACGGGGAGACCTGTTTGCACCAAGCAGCGGCCCTGGGCCAGCG GCGGGCTGAGAAGGCTCAGGACACCGAGCTGGCCGCCTACCTGGAGAACCGGCAGCACTACCAGATGATCCAGCG GGAGGACCAGGAGACGGCTGTG<u>TAG</u>CGGGCCGCCCACGGGCAGCAGGAGGGACAATGCGGCCAGGGGACGAGCGC CTTCCTTGCCCACCTCACTGCCACATTCCAGTGGGACGGCCACGGGGGACCTAGGCCCCAGGGAAAGAGCCCCA TGCCGCCCCTAAGGAGCCGCCCAGACCTAGGGCTGGACTCAGGAGCTGGGGGGGCCTCACCTGTTCCCCTGAGG ACCCCGCCGGACCCGGAGGCTCACAGGGAACAAGACACGGCTGGGTTGGATATGCCTTTGCCGGGGTTCTGGGGC CTTCCTGGGCCCCTGGTCTTCGGCCGGGTCCCCAGCCCCGCTCCTGCCCCACCCCACCTCCTCCGGGCTTCCT

MEPRDGSPEARSSDSESASASSSGSERDAGPEPDKAPRRLNKRRFPGLRLFGHRKAITKSGLQHLAPPPPTPGAP
CSESERQIRSTVDWSESATYGEHIWFETNVSGDFCYVGEQYCVARMLKSVSRRKCAACKIVVHTPCIEQLEKINF
RCKPSFRESGSRNVREPTFVRHHWVHRRRQDGKCRHCGKGFQQKFTFHSKEIVAISCSWCKQAYHSKVSCFMLQQ
IEEPCSLGVHAAVVIPPTWILRARRPQNTLKASKKKKRASFKRKSSKKGPEEGRWRPFIIRPTPSPLMKPLLVFV
NPKSGGNQGAKIIQSFLWYLNPRQVFDLSQGGPKEALEMYRKVHNLRILACGGDGTVGWILSTLDQLRLKPPPPV
AILPLGTGNDLARTLNWGGGYTDEPVSKILSHVEEGNVVQLDRWDLHAEPNPEAGPEDRDEGATDRLPLDVFNNY
FSLGFDAHVTLEFHESREANPEKFNSRFRNKMFYAGTAFSDFLMGSSKDLAKHIRVVCDGMDLTPKIQDLKPQCV
VFLNIPRYCAGTMPWGHPGEHHDFEPQRHDDGYLEVIGFTMTSLAALQVGGHGERLTQCREVVLTTSKAIPVQVD
GEPCKLAASRIRIALRNQATMVQKAKRRSAAPLHSDQQPVPEQLRIQVSRVSMHDYEALHYDKEQLKEASVPLGT
VVVPGDSDLELCRAHIERLQQEPDGAGAKSPTCQKLSPKWCFLDATTASRFYRIDRAQEHLNYVTEIAQDEIYIL
DPELLGASARPDLPTPTSPLPTSPCSPTPRSLQGDAAPPQGEELIEAAKRNDFCKLQELHRAGGDLMHRDEQSRT
LLHHAVSTGSKDVVRYLLDHAPPEILDAVEENGETCLHQAAALGQRTICHYIVEAGASLMKTDQQGDTPRQRAEK
AQDTELAAYLENRQHYQMIQREDQETAV

MAAAAVARLWWRGILGASALTRGTGRPSVLLLPVRRESAGADTRPTVRPRNDVAHKQLSAFGEYVAEILPKYVQQ VQVSCFNELEVCIHPDGVIPVLTFLRDHTNAQFKSLVDLTAVDVPTRQNRFEIVYNLLSLRFNSRIRVKTYTDEL TPIESAVSVFKAANWYEREIWDMFGVFFANHPDLRRILTDYGFEGHPFRKDFPLSGYVELRYDDEVKRVVAEPVE LAQEFRKFDLNSPWEAFPVYRQPPESLKLEAGDKKPDAK

GATTCGCTGCTCCGCAGCACGGCCGGAGCTGGTCGGGTCAAGAGTCGGGATTTGTGGGGAAGAGGTTTTCCACTGG TCAAGAGAGGCTTTAAGAAAGACGGTATTAATCTCCCGTTGCGGCTCCCGCCTGGTCCCATCTTCTGCCCGCTC CTCCAGGAAATGAATCTGCTGCCGAATATTGAGAGTCCAGTGACTCGGCAGGAGAAGATGGCGACCGTGTGGGAT GAGGCCGAGCAAGATGGAATTGGGGAGGAGGTGCTCAAGATGTCCACGGAGGAGATCATCCAGCGCACACGGCTG CTGGACAGTGAGATCAAGATCATGAAGAGTGAAGTGTTGAGAGTCACCCATGAGCTCCAAGCCATGAAGGACAAG ATAAAAGAGAACAGTGAGAAAATCAAAGTGAACAAGACCCTGCCGTACCTTGTCTCCAACGTCATCGAGCTCCTG GATGTTGATCCTAATGACCAAGAGGAGGATGGTGCCAATATTGACCTGGACTCCCAGAGGAAGGGCAAGTGTGCT GTGATCAAAACCTCTACACGACAGACGTACTTCCTTCCTGTGATTGGGTTGGTGGATGCTGAAAAGCTAAAGCCA GGAGACCTGGTGGGTGTGAACAAAGACTCCTATCTGATCCTGGAGACGCTGCCCACAGAGTATGACTCGCGGGTG AAGGCCATGGAGGTAGACGAGAGGCCCACGGAGCAATACAGTGACATTGGGGGTTTGGACAAGCAGATCCAGGAG $\tt CTGGTGGAGGCCATTGTCTTGCCAATGAACCACAAGGAGAAGTTTGAGAACTTGGGGATCCAACCTCCAAAAGGG$ GTGCTGATGTATGGGCCCCCAGGGACGGGAAGACCCTCCTGGCCCGGGCCTGTGCCGCACAGACTAAGGCCACC TTCCTAAAGCTGGCCGCCCCAGCTGGTGCAGATGTTCATTGGAGATGGTGCCAAGCTAGTCCGGGATGCCTTT GCCCTGGCCAAGGAGAAAGCGCCCTCTATCATCTTCATTGATGAGTTGGATGCCATCGGCACCAAGCGCTTTGAC AGTGAGAAGGCTGGGGACCGGGAGGTGCAGAGGACAATGCTGGAGCTTCTGAACCAGCTGGATGGCTTCCAGCCC AACACCCAAGTTAAGGTAATTGCAGCCACAAACAGGGTGGACATCCTGGACCCCGCCCTCCTCCGCTCGGGCCGC $\tt CTTGACCGCAAGATAGAGTTCCCGATGCCCAATGAGGAGGCCCGGGCCAGAATCATGCAGATCCACTCCCGAAAG$ ATGAATGTCAGTCCTGACGTGAACTACGAGGAGCTGGCCCGCTGCACAGATGACTTCAATGGGGCCCAGTGCAAG GCTGTGTGTGTGGAGGCGGCATGATCGCACTGCGCAGGGGTGCCACGGAGCTCACCCACGAGGACTACATGGAA GGCATCCTGGAGGTGCAGGCCAAGAAGAAGCCAACCTACAATACTACGCCTAGGGCACACAGGCCAGCCCCAGT CTCACGGCTGAAGTGCGCAATAAAAGATGGTTTAGGGTCCCTGCC

GGGGCCGCCGGATCGCCGCCGCCGCCGCACGTACGTGGCATGCCTGGATGTCCCTGCCCTGGCTGTGGCAT GGCGGCCCAAGGCTCCTCTCCTCACTGCCCTTGCCCTGGAGCTCTTGGAAAGGGCTGGGGGTTCCCAGCCGGC CCTCCGGAGCCGGGGGACTGCGACGGCCTGTCGCCTGGACAACAAGGAAAGCGAGTCCTGGGGGGGCTCTGCTGAG CGGAGAGCGGCTGGACACCTGGATCTGCTCCTCCTGGGTTCCCTCATGGTGGGGCTCAGTGGGGTCTTCCCGTT GCTTGTCATTCCCCTAGAGATGGGGACCATGCTGCGCTCAGAAGCTGGGGCCTGGCGCCTGAAGCAGCTGCTCAG CTTCGCCCTGGGGGGACTCTTGGGCAATGTGTTTCTGCATCTGCTGCCCGAAGCCTGGGCCTACACGTGCAGCGC CAGCCCTGGTGGTGAGGGGCAGAGCCTGCAGCAGCAGCAGCAGCTGGGGCTGTGGGTCATTGCTGGCATCCTGAC TGCTGCTGCCGCCGCGCTCAATGGAGGCCACTGTCTGGCCCAGCCGGCTGCAGAGCCCGGCCTCGGTGCCGTGCT GGCTGCCAGCTTCCTTGTGAGCAAGAAGATCGGGCTCCTGACAACCATGGCCATCCTCCTGCATGAGATCCCCCA TGAGGTGGGCGACTTTGCCATCCTGCTCCGGGCCGGCTTTGACCGATGGAGCGCAGCCAAGCTGCAACTCTCAAC AGCGCTGGGGGGCCTACTGGGCGCTGGCTTCGCCATCTGTACCCAGTCCCCCAAGGGAGTAGTTGGGTGTTCTCC $\tt CGCTGCAGAGGAGGCAGCCTGGGTCCTGCCCTTCACCTCTGGCGGCTTTCTCTACATCGCCTTGGTGAACGT$ GCTCCCTGACCTCTTGGAAGAAGAGACCCGTGGCGCTCCCTGCAGCAGCTGCTTCTGCTCTGTGCGGGCATCGT GGTAATGGTGCTGTTCTCGCTCTTCGTGGATTAACTTTCCCTGATGCCGACGCCCCTGCCCCTGCAGCAATAAG $\tt CGCCAGACAGGAGGGAGGTGCGTGTGGATGTATGTGGTGTGCACATGTGGCCAGAGGTGTGTGCGCGAGACCGAC$ ACTGTGATCCCTGTGCTGGGTCCGGGGCCCAGTGTAGCGCCTGTCCCCAGCCATGCTGTGGTTACCTCTCCTTGC CGCCCTGTCACCTTCACCTCCCGGAGTAAGCAGCGAGGAAGAGCAGCACTGGTCCCAAGCAGAGGCCTTGCCCTG $\tt CTGGGACCCCGGGAGTGAGAGCAGCCCAAGGATCCAGGGTGCAGGGAACTCCAGAGCTGCCCACCTCCCACTGCC$ $\tt CCCTCAGCACACACACTCCCCAGGCGGCCTAGGGGCCCAAGGCTGGGGCGGCTTTGGTCCCTTTTCCTGGCCCT$ ${\tt TCCTTCCCCACTTCTAAGCCAAAGAAAGGAGAGGCAGGTGCTCCTGTACCCCAGCCCCACTCAGCACTGACAGTC}$ CCCAGCTCCTAGTAGTGAGCTGGGAGGCGCTTCCTAAGACCCTTTCCTCAGGGCTGCCCTGGGAGCTCATTCCTG GCCAACACGCCCTGGCAGCACCAGCAGCTCTTGCCACCTCCAGCTGCCAAACAGCAGCCTGCCGGGCAGGAGCA GCCCCAGGCCAGAGAGGCCTCCCGGTCCAGCTCAGGGATGCTCCTGCCAGCACAGGGGCCAGGGACTCCTGGAGC GGCGGTGAGGGCTCCACGTTGTCAGCGCTCAGGAATGTGCTCCGGCAGAGTGCTGAAGCCATAATCCCCAACCAT TTCCCTTGGCTGACGCCCAGGTACTCAGCTGGCCCACTCCACAGCCAGGCCTGGCCCTGCCCTTCACCGTGGATG TTTTCAGAAGTGGCCATCGAGAGGTCTGGATGGTTTTATAGCAACTTTGCTGTGATTCCGTTTGTATCTGTAAAT ATTTGTTCTATAGATAAGATACAAATAAATATTATCCACAT

MPGCPCPGCGMAGPRLIFLTALALELLERAGGSQPALRSRGTATACRLDNKESESWGALLSGERLDTWICSLLGS LMVGLSGVFPLLVIPLEMGTMLRSEAGAWRLKQLLSFALGGLLGNVFLHLLPEAWAYTCSASPGGEGQSLQQQQQ LGLWVIAGILTFLALEKMFLDSKEEGTSQAPNKDPTAAAAALNGGHCLAQPAAEPGLGAVVRSIKVSGYLNLLAN TIDNFTHGLAVAASFLVSKKIGLLTTMAILLHEIPHEVGDFAILLRAGFDRWSAAKLQLSTALGGLLGAGFAICT QSPKGVVGCSPAAEETAAWVLPFTSGGFLYIALVNVLPDLLEEEDPWRSLQQLLLLCAGIVVMVLFSLFVD

CAGTGCCTTGGTAATGACCAGGGCTCCAGAAAGAGATGTCCTTGTGGCTGGGGGGCCCCTGTGCCTGACATTCCTC CTGACTCTGCGGTGGAGCTGTGGAAGCCAGGCGCACAGGATGCAAGCAGCCAGGCCAGGGAGGCAGCAGCTGCA TCCTCAGAGAGGAAGCCAGGATGCCCCACTCTGCTGGGGGGTACTGCAGGGGTGGGGGCTGCAGAGCCCCA CAGCCCTGCTCACCAGGGCAGAGCCCCCTTCAGAACCCACAGAGATCCGTCCACAAAAGCGGAAAAAAGGGGCCAG CCCCCAAAATGCTGGGGAACGAGCTATGCAGCGTGTGTGGGGACAAGGCCTCGGGCTTCCACTACAATGTTCTGA GCTGCGAGGGCTGCAAGGGATTCTTCCGCCGCAGCGTCATCAAGGGAGCGCACTACATCTGCCACAGTGGCGGCC ACTGCCCCATGGACACCTACATGCGTCGCAAGTGCCAGGAGTGTCGGCTTCGCAAATGCCGTCAGGCTGGCATGC GGGAGGAGTGTGTCCTGTCAGAAGAACAGATCCGCCTGAAGAAACTGAAGCGGCAAGAGGAGGAACAGGCTCATG CCACATCCTTGCCCCCCAGGCGTTCCTCACCCCCCAAATCCTGCCCCAGCTCAGCCCGGAACAACTGGGCATGA TCGAGAAGCTCGTCGCTGCCCAGCAACAGTGTAACCGGCGCTCCTTTTCTGACCGGCTTCGAGTCACGCCTTGGC CCATGGCACCAGATCCCCATAGCCGGGAGGCCCGTCAGCAGCGCTTTGCCCACTTCACTGAGCTGGCCATCGTCT CTGTGCAGGAGATAGTTGACTTTGCTAAACAGCTACCCGGCTTCCTGCAGCTCAGCCGGGAGGACCAGATTGCCC TGCTGAAGACCTCTGCGATCGAGGTGATGCTTCTGGAGACATCTCGGAGGTACAACCCTGGGAGTGAGAGTATCA TCTTCGAGTTCTCCAGGGCCATGAATGAGCTGCAACTCAATGATGCCGAGTTTGCCTTGCTCATTGCTATCAGCA TCTTCTCTGCAGACCGGCCCAACGTGCAGGACCAGCTCCAGGTGGAGAGGCTGCAGCACACATATGTGGAAGCCC TGCATGCCTACGTCTCCATCCACCATCCCCATGACCGACTGATGTTCCCACGGATGCTAATGAAACTGGTGAGCC ${\tt TCCGGACCCTGAGCAGCGTCCACTCAGAGCAAGTGTTTGCACTGCGTCTGCAGGACAAAAAGCTCCCACCGCTGC}$ ${\tt TCTCTGAGATCTGGGATGTGCACGAA} {\tt TGA} {\tt CTGTTCTGTCCCCATATTTTCTGTTTTCTTGGCCGGATGGCTGAGG$ ${\tt CCTGGTGGCTGCCTCCTAGAAGTGGAACAGACTGAGAAGGGCCAAACATTCCTGGGAGCTGGGCAAGGAGATCCTC}$ CCGTGGCATTAAAAGAGAGTCAAAGGGT

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GGCACGAGGAGGACTCGGGCCGGAGCGTGGCCGGACCCCCACCGGCGAGGGGCCCCAGGGAGGACGCGGCAGAGT CACGGTGGCAGCATTGAGAGTTGGACACCCGGGTCCTTGAAGTGATCTCTAGGCCCCAGCCCCAAATCCGCCACC ATTCCGTGCTGCGGGGACACC<u>ATG</u>GCTCCAGAAGAGGACGCTGGAGGGGAGGCCTTAGGGGGCAGTTTCTGGGAG GCTGGCAACTACAGGCGCACGGTACAGCGGGTGGAGGACGGGCACCGGCTGTGCGGGGACCTGGTCAGCTGCTTC CAGGAGCGCCCCCCATCGAGAAGGCTTATGCCCAGCAGTTGGCTGACTGGGCCCGAAAGTGGAGGGGGACCGTG GAGAAGGGCCCCCAGTATGGCACACTGGAGAAGGCCTGGCATGCCTTTTTCACGGCGGCTGAGCGGCTGAGCGCG CTGCACCTGGAGGTGCGGGAGAAGCTGCAAGGGCAGGACAGTGAGCGGGTGCGCGCCTGGCAGCGGGGGGCTTTC CTGAAGAGGCTGAAGGAGGTTGAGGCTTCCAAGAAAAGCTACCACGCAGCCCGGAAGGATGAGAAGACCGCCCAG ACGAGGGAGAGCCACGCAAAGGCAGACAGCGCCGTCTCCCAGGAGCAGCTGCGCAAACTGCAGGAACGGGTGGAA CGCTGTGCCAAGGAGGCCGAGAAGACAAAAGCTCAGTATGAGCAGACGCTGGCAGAGCTGCATCGCTACACTCCA CGCTACATGGAGGACATGGAACAGGCCTTTGAGACCTGCCAGGCCGCGAGCGCCAGCGGCTTCTTTTCTAAG GATATGCTGCTCACCTTACACCAGCACCTGGACCTTTCCAGCAGTGAGAAGTTCCATGAACTCCACCGTGACTTG CACCAGGGCATTGAGGCAGCCAGTGACGAAGAGGATCTGCGCTGGTGGCGCAGCACCCACGGGCCAGGCATGGCC ATGAACTGGCCACAGTTCGAGGAGTGGTCCTTGGACACACAGAGGACAATCAGCCGGAAAGAGAAGAGGGTGGCCGG AGCCCTGATGAGGTTACCCTGACCAGCATTGTGCCTACAAGAGATGGCACCGCACCCCACCCCAGTCCCCGGGG TCCCCAGGCACGGGCAGGATGAGGAGTGGTCAGATGAAGAGGTCCCCGGAAGGCTGCCACCGGGGTTCGGGTG AGGGCACTCTATGACTACGCTGGCCAGGAAGCTGATGAGCTGAGCTTCCGAGCAGGGGAGGAGCTGCTGAAGATG AGTGAGGAGGACGAGCAGGGCTGGTGCCAAGGCCAGTTGCAGAGTGGCCGCATTGGCCTGTACCCTGCCAACTAC $\tt GTGGAGTGTGGGGGGCC\underline{TGA}_{GTGTCCTGACAGCCCTTCTGCAACGTTTACCCACCCTGGTTCAGAGCCCAGCTT$ CCTGGGACCCAGGGAGGGGAGGGGCCTTTGTCTAGGGAAGGGACTGGTAGGGAAGGGACGAGTCTAGGCTGAGGG CAAGATGGGAGGTCAGAGGTGACAGAAGCGTTCAGGGGTGCCTGGGCCTCCCCAGGAGCTGTGGACTCAGTTCCT GACCTCTGCTTTGGGGTTCCTGGGGTGGGCTTGGGGTGAGTTCTGGCCTAGCAGCACCCTCTTGTGGCTT **ААААААААААААААААААААААААА**

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3489/6881 FIGURE 3218

 ${\tt AGGTTTCGGCGGGGGCTGCACGTGCGCAGGGGTGTGGAAACTTACCGGCTGAGCC} \underline{{\tt ATG}} {\tt GATACACCGTTAAGGCG}$ $\tt CAGCCGACGGCTGGGAGGCCTAAGGCCCGAATCCCCCGAGAGCCTCACCTCAGTTTCGCGGACGAGACGGGCCCT$ TGTGGAGTTCGAGTCGAACCCAGAAGAAACGAGGGAGCCCGGGTCTCCTCCGAGTGTGCAGCGGGCTGGCCTGGG GTCCCCCGAAAGGCCGCCGAAGACAAGCCCAGGATCACCCCGTCTGCAGCAGGGTGCAGGCTTGGAGTCACCCCA AGGGCAGCCAGAGCCAGGCGCAGCGTCCCCCAGCGTCAGCAAGACCTACACCTGGAGTCGCCTCAAAGACAGCC AGAGTACAGTCCTGAATCCCCACGATGTCAGCCGAAGCCAAGTGAGGAGGCACCAAAGTGTTCTCAGGACCAGGG AGTACTGGCCTCGGAGTTGGCCCAGAATAAGGAGGAGCTGACCCCGGGGGCCCCCCAGCATCAGCTACCGCCGGT CCCAGGATCACCAGAGCCTTACCCCGGTCAGCAAGCTCCCGGTCCGGAGCCCTCTCAGCCACTACTGGAGCTGAC ACCCAGGGCACCTGGCTCCCCCGGGGTCAGCATGAGCCGAGCAAGCCACCTCCAGCTGGGGAGACGGTGACAGG CGGCTTCGGGGCAAAGAAGCGAAAAGGTTCTTCATCCCAGGCCCCAGCGTCCAAGAAGTTGAATAAAGAGGAGCT TCCTGTAATCCCGAAGGGGAAGCCCAAATCGGGGCGAGTGTGGAAGGACCGCTCCAAGAAAAGATTCTCCCAGAT GCTTCAGGACAAGCCCCTGCGCACATCGTGGCAGCGGAAGATGAAGGAACGACAGGAGGAAGCTGGCCAAGGA CTTTGCCCGTCACCTGGAGGAGGAGGAGGAGGAGGAGGAGGAGAAACAGCGCCGGGCTGAGAACCTGAA ACGCCGCCTGGAGAATGAGCGGAAGGCAGAGGTCGTCCAAGTGATCCGAAACCCCGCCAAGCTCAAGCGGGCAAA GAAGAAGCAGCTGCGCTCCATTGAGAAGCGGGACACCCTGGCCCTGCTGCAGAAGCAGCCGCCCCAGCAGCCGGC CTGCTCAGATGCCTCTGCTGGAGCTGGCACTCCAAACCCATGGCTCCAGAACGGGGACCCCCACCCCGACCGGGG CTCCTCGGCCTTTGAAGGCTTCCAGGCAGGTCTGTGTGGGACAGAAGCCCAGAGGGGGGCCTGGGACCTGGCAGAG CATTCTTCTGGTTCCTCAGTGAGCTGGTGACTGGCAGGTGACTCCCTCAGCAGTGTATGCCCTTTCTCAGCATCC TAGGTCCATCCCAGGCCTGGAGGCTGACAGTTGGGAATCCAGCTTCCCCCACACCTTCCCAAAGGCTGCTCTGAG CACCTCCACACCCCACTGCCTCTGTCCCCAGCAAACTGAATCCGGTTCCTCTCCACTTTTCAATACTGAAAGATT AAAATGGGGAGGTTGCAGGGAGCAGAGCTTTTCCCTAGCACCCACTTTCCCAAACCAGTCTCTGCAGAAGCCCCA AGGCACCGGCAAATACAGACAATAGACCAAAGTCCCTGCCCTCGAGGAGCTTTCATTCTGATGGAGAGAAAACAT AATAAACAAGCAAAATGCAAAAAAAAAAAAAAAAAA

MDTPLRRSRRLGGLRPESPESLTSVSRTRRALVEFESNPEETREPGSPPSVQRAGLGSPERPPKTSPGSPRLQQG AGLESPQGQPEPGAASPQRQQDLHLESPQRQPEYSPESPRCQPKPSEEAPKCSQDQGVLASELAQNKEELTPGAP QHQLPPVPGSPEPYPGQQAPGPEPSQPLLELTPRAPGSPRGQHEPSKPPPAGETVTGGFGAKKRKGSSSQAPASK KLNKEELPVIPKGKPKSGRVWKDRSKKRFSQMLQDKPLRTSWQRKMKERQERKLAKDFARHLEEEKERRRQEKKQ RRAENLKRRLENERKAEVVQVIRNPAKLKRAKKKQLRSIEKRDTLALLQKQPPQQPAAKI

AATTCGGCACGAGGAGGTGCTGAAGGCTGTGGCGCGCGGCTGTCCCCATTCCCACGTGAAGCGCTACGCTAGCAT CGCTCGGCTGGCGGCTCCCAGCTCGCCGGGAGCAGTCCCGGCAGCAGCGGGGGACCGGAAGTGGCTCGCGGAGG $\tt CTCAGAAGCTAGTCCCGGAGCCCGGCGTGTGGCGCCTCGGAGCACGGTGACGGCGCC\underline{ATG}{\tt CCCTAATCTGCTCC}$ ATCTCTAACGAAGTGCCGGAGCACCCATGTGTATCCCCTGTCTCAATCATGTTTATGAGCGGCGGCTCATCGAG AAGTACATTGCGGAGAATGGTACCGACCCCATCAACAACCAGCCTCTCTCCGAGGAGCAGCTCATCGACATCAAA GTTGCTCACCCAATCCGGCCCAAGCCTCCCTCAGCCACCAGCATCCCGGCCATTCTGAAAGCTTTGCAGGATGAG TGGGATGCAGTCATGCTGCACAGCTTCACTCTGCGCCAGCAGCTGCAGACAACCCGCCAAGAGCTGTCACACGCT CTGTACCAGCACGATGCCGCCTGCCGTGTCATTGCCCGTCTCACCAAGGAAGTCACTGCTGCCCGAGAAGCTCTG GGTGAGCCAATGGATTTGGGTGAGCTGGTGGGAATGACCCCAGAGATTATTCAGAAGCTTCAAGACAAAGCCACT GTGCTAACCACGGAGCGCAAGAAGAGAGGGAAGACTGTGCCTGAGGAGCTGGTGAAGCCAGAAGAGCTCAGCAAA TACCGGCAGGTGGCATCCCACGTGGGGTTGCACAGTGCCAGCATTCCTGGGATCCTGGCCCTGGACCTCTGCCCG TCCGACACCAACAAGATCCTCACTGGTGGGGGGGATAAAAATGTCGTTGTGTTTGACAAAAGTTCTGAACAAATC CTGGCTACCCTCAAAGGCCATACCAAGAAGGTCACCAGCGTGGTGTTTCACCCTTCCCAGGACCTGGTGTTTTCT GCTTCCCCCGATGCCACTATCAGGATTTGGTCGGTCCCCAATGCCTCTTGTGTACAGGTGGTTCGGGCCCATGAG AGTGCTGTGACAGGCCTCAGCCTTCATGCCACTGGCGACTATCTCCTGAGCTCCTCCGATGATCAGTACTGGGCT TTCTCTGACATCCAGACAGGGCGTGTGCTCACCAAGGTGACAGATGAGACCTCCGGCTGCTCTCACCTGTGCA CAGTTCCACCCTGACGGACTCATCTTTGGAACAGGAACCATGGACTCTCAGATCAAGATCTGGGACTTGAAGGAA CGTACTAATGTGGCCAACTTCCCTGGCCACTCGGGCCCCATCACTAGCATCGCCTTCTCTGAGAATGGTTACTAC $\tt CTGGCTACAGCGGCTGATGACTCCTCTGTCAAGCTCTGGGGATCTGCGCAAGCTTAAGAACTTTAAGACTTTGCAG$ GTCCAGATCTACATCTGCAAACAATGGACGGAGATTCTTCACTTTACAGAGCACAGTGGCCTGACCACAGGGGTG GCCTTCGGGCATCACGCCAAGTTCATCGCTTCAACAGGCATGGACAGAAGCCTCAAGTTCTACAGCCTG**TAC**GCC ATCTATGGGGGGGGGGGCTCTGTGGGGTGGGACATTCACATCATTTCACTCTGGTCTGAGTGGTGGCCTGAGAA ACACCCATTTTGTTGCAGTTCCTGTGAGACAGGAGAGGCTGAGCCAAGGGAACTGTGAAGGGGATGGGCAGGAGG

MSLICSISNEVPEHPCVSPVSNHVYERRLIEKYIAENGTDPINNQPLSEEQLIDIKVAHPIRPKPPSATSIPAIL KALQDEWDAVMLHSFTLRQQLQTTRQELSHALYQHDAACRVIARLTKEVTAAREALATLKPQAGLIVPQAVPSSQ PSVVGAGEPMDLGELVGMTPEIIQKLQDKATVLTTERKKRGKTVPEELVKPEELSKYRQVASHVGLHSASIPGIL ALDLCPSDTNKILTGGADKNVVVFDKSSEQILATLKGHTKKVTSVVFHPSQDLVFSASPDATIRIWSVPNASCVQ VVRAHESAVTGLSLHATGDYLLSSSDDQYWAFSDIQTGRVLTKVTDETSGCSLTCAQFHPDGLIFGTGTMDSQIK IWDLKERTNVANFPGHSGPITSIAFSENGYYLATAADDSSVKLWDLRKLKNFKTLQLDNNFEVKSLIFDQSGTYL ALGGTDVQIYICKQWTEILHFTEHSGLTTGVAFGHHAKFIASTGMDRSLKFYSL

GACGGCGCGGAGCGGGTGCGGGAGATGCCGTGCGGGACTGGGGCCACCTGAGCCGCCCCGCCTCGTCCCCGCCTTC TGTGGGAAGGATGTGCGCGGATGGCCGGTCGCACAACAGCGGCCCCTCGGGGGCCCCTACGGCCCCTGGCTCTG CCTCCTGGTGGCCCTGGCCCTGGACGTCGTGAGAGTGGACTGTGGCCAGGCTCCCCTGGACCCTGTCTACCTGCA TGTGACAGCCGCCCGCCCAGCCCACCCCCCCCCCCAGCCTGGACTGCCAAGCTGGACCGCTTCAAGGGCTCCAGGCACCA CACCACCTCATCACCTGCCACCGTGCTGGGCTCACAGAGCCAGATTCCAGCAGTCCCCTTGAACTGTCTGAGTT CCTATGGGTGGACTTTGTGGTGGAGAATAGCACTGGTGGGGGGGCGTAGCGGTCACTCGCCCCGTCACGTGGCAGCT GGAGTACCCAGGCCAGGCCCCTGAAGCAGAGAAGGACAAAATGGTGTGGGAAATCCTGGTGTCTGAGCGGGACAT $\tt CCCCGTGCGCCTTGTCACTGTGGACGGGGGGGGGCCTTGGTGGAGGTGACAGAGCATGTCGGCTGCGAGTCTGC$ GGGGGTGCGAGTGGACTTCTGGTGGCGCCGGCTCCGCGCCTCGCTGCGGCTGACCGTGTGGGCCCCCCTGCTACC GCTGCGTATCGAGCTCACCGACACCCTCGAGCAGGTCCGCGGCTGGAGGGTACCTGGCCCTGCAGGGCC TGCGGAACCCGCTGCAGAGGCGTCGGATGAGGCCGAGCGGCGCCCCTGGCTGCCACCTGCAGTACCAGCGGGC CGGTGTGCGCTTCCTCGCCCCCTTCGCGGCCCACCCGCTGGACGGCCGCCGCCTCACGCACCTGCTTGGCCC GGGTGGCCGTGTCGTGGTGGGCCGGGAGCCCGGTGTCACCTCCATTGAGGTGCGTTCCCCACTGTCTGACTCCAT CATCTCGCTGACCTTGAGCCGGGGCACTGCCCACCCCGGGGAGGTCACAGCTACGTGCTGGGCACAGTCAGCCCT TCCCGCCCAAAGCAGGAGGTGGCCCTCTCCCTATGGCTGTCCTTCTCTGATCACACTGTGGCCCCAGCTGAGCT CTACGACCGCCGTGACCTGGGACTGTCCGTCTCAGCCGAGGAGCCTGGTGCCATCCTGCCAGCTGAGGAGCAGGG TCCAGCCCTGCTCTCCCATCCAGCCCTGCTTGGAGCCCACCAGCCACAGAAGCCACCATGGGTGGTAAACGGCA AGAGCTGGGCATGTACGCCCTGCTGGGAGTCTTCTGCGTGGCCATCTTCATCTTCTTGGTCAATGGTGTGGTCTT CGTCCTGCGCTATCAGCGCAAAGAACCTCCCGACAGTGCCACTGACCCCACCTCCCCCAGCCCACAACTGGGT GAGCTGCCCTGTGAGAGTGGGGGAGGAGGGGGGGCCCCTACCCTGGCCCTGGCCCTCCTGGGGGCACCACCAG CTCCTCAAGCACCCTGGCCCGAAAGGAGGCTGGGGGGGCGGAAGCGAGTAGAGTTTGTGACATTTGCGCCAGC CCCTCCAGCCCAGTCACCTGAGGAGCCTGTAGGGGCCCCTGCTGTGCAGTCCATCCTTGTGGCAGGCGAGGAGGA CATCCGCTGGGTGTGTGAGGACATGGGGCTGAAGGACCTTGAGGAGCTTCGCAACTACATGGAGAGGATCCGGGG CAGCTCCTGACCCTCCACAGCCACCTGGTCAGCCACCAGCTGGGGCAACGAGGGTGGAGGTCCCACTGAGCCTCT TTTCATTCTAACAGAATAAACCGAGAAGGAAACCAG

3494/6881 FIGURE 3223A

CAGCGGCAGTGGAGTTCGCTGCGCGCTGTTGGGGGCCCACCTGTCTTTTCGCTTGTGTCCCTCTTTCTAGTGTCGC GCTCGAGTCCCGACGGGCCGCTCCAAGCCTCGACATGTCGTACAACTACGTGGTAACGGCCCAGAAGCCCACCGC CGTGAACGGCTGCGTGACCGGACACTTTACTTCGGCCGAAGACTTAAACCTGTTGATTGCCAAAAACACGAGATT AGAGATCTATGTGGTCACCGCCGAGGGGCTTCGGCCCGTCAAAGAGGTGGGCATGTATGGGAAGATTGCGGTCAT GGAGCTTTTCAGGCCCAAGGGGGAGAGCAAGGACCTGCTGTTTATCTTGACAGCGAAGTACAATGCCTGCATCCT GGAGTATAAACAGAGTGGCGAGAGCATTGACATCATTACGCGAGCCCATGGCAATGTCCAGGACCGCATTGGCCG CCCCTCAGAGACCGGCATTATTGGCATCATTGACCCTGAGTGCCGGATGATTGGCCTGCGTCTCTATGATGGCCT TTTCAAGGTTATTCCACTAGATCGCGATAATAAAGAACTCAAGGCCTTCAACATCCGCCTGGAGGAGCTGCATGT CATTGATGTCAAGTTCCTATATGGTTGCCAAGCACCTACTATTTGCTTTGTCTACCAGGACCCTCAGGGGCGGCA CGTAAAAACCTATGAGGTGTCTCTCCGAGAAAAGGAATTCAATAAGGGCCCTTGGAAACAGGAAAATGTCGAAGC TCACAATGGTGACAAATACCTGGCTATTGCCCCTCCTATCATCAAGCAAAGCACGATTGTGTGCCACAATCGAGT GGACCCTAATGGCTCAAGATACCTGCTGGGAGACATGGAAGGCCGGCTCTTCATGCTGCTTTTGGAGAAGGAGGA ACAGATGGATGGCACCGTCACTCTCAAGGATCTCCGTGTAGAACTCCTTGGAGAGACCTCTATTGCTGAGTGCTT GACATACCTTGATAATGGTGTTGTGTTTGTCGGGTCTCGCCTGGGTGACTCCCAGCTTGTGAAGCTCAACGTTGA CAGTAATGAACAAGGCTCCTATGTAGTGGCCATGGAAACCTTTACCAACTTAGGACCCATTGTCGATATGTGCGT CATCCGGAATGGAATTGGAATCCACGAGCATGCCAGCATTGACTTACCAGGCATCAAAGGATTATGGCCACTGCG GTCTGACCCTAATCGTGAGACTGATGACACTTTGGTGCTCTCTTTTGTGGGCCAGACAAGAGTTCTCATGTTAAA TGGAGAGGAGGTAGAAGAAACCGAACTGATGGGTTTCGTGGATGATCAGCAGACTTTCTTCTGTGGCAACGTGGC TCATCAGCAGCTTATCCAGATCACTTCAGCATCGGTGAGGTGGTCTCTCAAGAACCCAAAGCTCTGGTCAGTGAA TGGAAGGAGCCTCAGGCCAAGAACATCAGTGTGGCCTCCTGCAATAGCAGCCAGGTGGTGGTGGCTGTAGGCAGG GCCCTCTACTATCTGCAGATCCATCCTCAGGAGCTCCGGCAGATCAGCCACACAGAGATGGAACATGAAGTGGCT TCGGCTCGTATCTTGAAGTTGCCCTCTTTTGAACTACTGCACAAGGAGATGCTGGGTGGAGAGATCATTCCTCGC TCCATCCTGATGACCACCTTTGAGAGTAGCCATTACCTCCTTTGTGCCTTGGGAGATGGAGCGCTTTTCTACTTT GGGCTCAACATTGAGACAGGTCTGTTGAGCGACCGTAAGAAGGTGACTTTGGGCACCCAGCCCACCGTATTGAGG ACTTTTCGTTCTCTTTCTACCACCAACGTCTTTGCTTGTTCTGACCGCCCCACTGTCATCTATAGCAGCAACCAC AAATTGGTCTTCTCAAATGTCAACCTCAAGGAAGTGAACTACATGTGTCCCCTCAATTCAGATGGCTATCCTGAC AGCCTGGCGCTGGCCAACAATAGCACCCTCACCATTGGCACCATCGATGAGATCCAGAAGCTGCACATTCGCACA GTTCCCCTCTATGAGTCTCCAAGGAAGATCTGCTACCAGGAAGTGTCCCAGTGTTTCGGGGGTCCTCCCAGCCGC ATTGAAGTCCAAGACACGAGTGGGGGCACGACAGCCTTGAGGCCCAGCGCTAGCACCCAGGCTCTGTCCAGCAGT GTAAGCTCCAGCAAGCTGTTCTCCAGCAGCACTGCTCCTCATGAGACCTCCTTTGGAGAAGAGGTGGAGGTGCAC GAGGCAGAGCCCAAGCAGGGTCGCATTGTGGTCTTTCAGTATTCGGATGGAAAACTACAGACTGTGGCTGAAAAG GAAGTGAAAGGGGCCGTGTACTCTATGGTGGAATTTAACGGGAAGCTGTTAGCCAGCATCAATAGCACGGTGCGG CTCTATGAGTGGACAACAGAGAAGGAGCTGCGCACTGAGTGCAACCACTACAACAACATCATGGCCCTCTACCTG AAGACCAAGGGCGACTTCATCCTGGTGGGCGACCTTATGCGCTCAGTGCTGCTTGCCTACAAGCCCATGGAA GGAAACTTTGAAGAGATTGCTCGAGACTTTAATCCCAACTGGATGAGTGCTGTGGAAATCTTGGATGATGACAAT TTTCTGGGGGCTGAAAATGCCTTTAACTTGTTTGTGTGTCAAAAGGATAGCGCTGCCACCACTGACGAGGAGCGG CAGCACCTCCAGGAGGTTGGTCTTTTCCACCTGGGCGAGTTTGTCAATGTCTTTTGCCACGGCTCTCTGGTAATG CAGAATCTGGGTGAGACTTCCACCCCCACACAAGGCTCGGTGCTCTTCGGCACGGTCAACGGCATGATAGGGCTG GTGACCTCACTGTCAGAGAGCTGGTACAACCTCCTGCTGGACATGCAGAATCGACTCAATAAAGTCATCAAAAGT GTGGGGAAGATCGAGCACTCCTTCTGGAGATCCTTTCACACCGAGCGGAAGACAGAACCAGCCACAGGTTTCATC GACGGTGACTTGATTGAGAGTTTCCTGGATATTAGCCGCCCCAAGATGCAGGAGGTGGTGGCAAACCTACAGTAT GACGATGGCAGCGGTATGAAGCGAGAGGCCACTGCAGACGACCTCATCAAGGTTGTGGAGGAGCTAACTCGGATC WO 2004/030615 PCT/US2003/028547

3495/6881 FIGURE 3223B

GCCTGCAACGTGTCTCTGGGGCGGAGGCAGCGGCAGTGGAGTTCGCTGCGCGCTGTTGGGGGCCACCTGTCTTTT
CGCTTGTGTCCCTCTTTCTAGTGTCGCGCTCGAGTCCCGACGGGCCGCTCCAAGCCTCGACATGTCGTACAACTA
CGTGGTAACGGCCCAGAAGCCCACCGCCGTGAACGGCTGCGTGACCGGACACTTTACTTCGGCCGAAGACTTAAA
CCTGTTGATTGCCAAAAACACGAGATTAGAGATCTATGTGGTCACCGCCGAGGGGCTTCGGCCCGTCAAAGAGGT
GGGCATGTATGGGAAGATTGCGGTCATGGAGCTTTTCAGGCCCAAGGGGGAGAGCAAGGACCTGCTGTTTATCTT
GACAGCGAAGTACAATGCCTGCATCCTGGAGTATAAACAGAGTGGCGAGAGCATTGACATCATTACGCGAGCCCA
TGGCAATGTCCAGGACCGCATTGGCCGCCCCTCATAGACCGGCATTATTGGCATCATTGACCCTGAGTGCCGGAT
GATTGGCCTGCGTCTCTATGATGGCCTTTTCAAGGTTATTCCACTAGATCGCGATAATAAAGAACTCAAGGCCTT
CAACATCCGCCTGGAGGAGCTGCATGTCATTGATGTCAAGTTCCTATATGGTTGCCAAGCACCTACTATTTGCTT
TGTCTACCAGG

TCGGTGGCTGGCTGATGACGCTCTTGCTGGCCTGGTGGCCTGCAACCCCAACCTGCAGCTCCTGCAGGGC CATGAGCCTGCCCATGCTGGTTTCATAGGGAAGGGGATGCTGACTGGGGTCATCGCGGGAGCTGTGTTCACCTCC CCGGCAGTGGGCAGCATCCTGGCAGCCATCAGGGCCGTGGCCCAGGCCGGCACAGTGGGGACGCTCCTTATCGTG AAGAACTACACTGGGGATCGGCTCAACTTCGGCCTGGCCCGGGAGCAGGCCCGGGCTGAAGGCATCCCGGTGGAG CTTATACACAAGGTGGCAGGTGCTCTGGCTGAGGCTGGTGTGGGGCTGGAGGAGATCGCAAAGCAGGTGAACGTG GTCGCCAAGGCCATGGGTACCCTGGGGGTGAGCTTATCCTCCTGCAGCGTCCCTGGTTCCAAACCCACCTTCGAG GCCGATGAGATTGTGAAACTCATGCTCGACCACATGACAAACACCACCAACGCGTCCCATGTGCCTGTGCAGCCC GGCTCCTCAGTTGTGATGATGGTCAACAACCTGGGTGGCCTGTCATTCCTGGAACTGGGCATCATAGCCGACGCT ACCGTCCGCTCCCTGGAGGGCCGCGGGTGAAGATTGCCCGTGCCCTGGTGGGCACCTTCATGTCAGCACTGGAG ATGCCTGGCATTTCTCTCACCCTCCTGCTGGTGGATGAGCCTCTCCTGAAACTGATAGATGCTGAAACCACTGCA GCAGCCTGGCCTAACGTGGCTGCAGTCTCCATTACTGGGCGGAAGCCGGAGCCGGGTAGCCCCTGCCGAGCCCCAG GAGGCCCCTGATTCCACTGCTGCAGGAGGCTCAGCCTCGAAGCGGATGGCGCTGGTGCTGGAACGGGTGTGCAGC AAGTTGTCTGTCCTGCTCCTGGAGAAGATGGGAGGCTCATCTGGGGCGCTCTATGGCCTGTTCCTGACTGCGGCT GCACAGCCCTGAAGGCCAAGACCAGCCTCCCAGCCTGGTCTGCTGCCATGGATGCCGGCCTGGAAGCCATGCAG AAGTATGGCAAGGCTGCTCCAGGGGACAGGACTATGCTGGATTCTCTGTGGGCAGCGGGGGAGGAGCTCCAAGCC TGGAAGAGCCCAGGAGCTGATCTGTTACAAGTCCTGACCAAAGCAGTCAAGAGTGCCGAAGCTGCAGCCGAGGCC ACCAAGAATATGGAAGCTGGAGCCGGAAGAGCCAGTTATATCAGCTCAGCACGGCTGGAGCAGCCCAGACCCCGGG ${\tt GCGGTGGCAGCTGCCATCCTCGGGCCATCTTGGAGGTCTTGCAGAGC\underline{TAG}{\tt GGTGTGTGACTGCCTCCCTTG}}$ CCAGAGTGAGCTGGAGTGGGTCCCCATGCCTCTCCAGCATGCCCTTTCCCTTTGCAGGAGGGTGGAGTCCCTGGG TCATGCCCTCCCCTGCCAGCTCTGGGCTTCAGAGATAAGGCATTTTCCTTGTGCAGCCTTTACCTGGCAATCCTA CTATAATACATGGAAGCAAGAAAAAAAAAAAAAAA

MTSKKLVNSVAGCADDALAGLVACNPNLQLLQGHRVALRSDLDSLKGRVALLSGGGSGHEPAHAGFIGKGMLTGV
IAGAVFTSPAVGSILAAIRAVAQAGTVGTLLIVKNYTGDRLNFGLAREQARAEGIPVEMVVIGDDSAFTVLKKAG
RRGLCGTVLIHKVAGALAEAGVGLEEIAKQVNVVAKAMGTLGVSLSSCSVPGSKPTFELSADEVELGLGIHGEAG
VRRIKMATADEIVKLMLDHMTNTTNASHVPVQPGSSVVMMVNNLGGLSFLELGIIADATVRSLEGRGVKIARALV
GTFMSALEMPGISLTLLLVDEPLLKLIDAETTAAAWPNVAAVSITGRKRSRVAPAEPQEAPDSTAAGGSASKRMA
LVLERVCSTLLGLEEHLNALDRAAGDGDCGTTHSRAARAIQEWLKEGPPPASPAQLLSKLSVLLLEKMGGSSGAL
YGLFLTAAAQPLKAKTSLPAWSAAMDAGLEAMQKYGKAAPGDRTMLDSLWAAGQELQAWKSPGADLLQVLTKAVK
SAEAAAEATKNMEAGAGRASYISSARLEQPDPGAVAAAAILRAILEVLQS

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3499/6881 FIGURE 3227

AGTCTGGCCGCCATGTTGGAGCTTTCGCTGTTCGGGGCCCGGCCTGCTCCGGGCCCTCCCAGCGTCGCCGCTAGC TGACTTAGGGCTCCCGCCCACACTGCGCACGGCCTTGCTGAGGGCCGGCTCGTAGTGGGAGGCTTCGCGTTCACC TGAACATTTCCGCCTCCTCTGGATGGGGGATGAGAGGCGGGGCTGATGCATCGCAGCAGTCCTGGACCCTGACTT CGGACTTGGAGAAGAACGCCGAGGAGGAACGGGAGTTAGGGGGTTAGCAGCTTGGCGCGCTGGGAGCCGGCCAC GCGGCACCCGCCGCTCTGCTCTGGGGCGGCATTGCCAGCCGGCTGTAGGCATTCAGGCAGTGTCTTCTGCATCT $\tt CCTAGGAACCTCGGGGGCAGCTCCGGCGCCTGGTAGCGAGAGGCGGGTTCCGGAGATCCCGGCCTCACTTCG$ TCCCACTGTGGTTAGGGGTGAGTCCTGCAAATGTTAAGTGATTTGCTCAAGGTGCCCATTTCGCAGGAATTGGAG ${\tt CCCAGGCCAGTTCTCTGAGCCTATCATTAGGGCTAAAGGAGTGCGTGATCAGAATGGTGTCTGGACGGTTCTACT}$ TGTCCTGCCTGCTGCGGGGTCCCTGGGCTCTATGTGCATCCTCTTCACTATCTACTGGATGCAGTACTGGCGTG GTGGCTTTGCCTGGAATGGCAGCATCTACATGTTCAACTGGCACCCAGTGCTTATGGTTGCTGGCATGGTGGTAT ATGCAGCGCTGCACCTGATGGCCTTCGTCCTCACTGTTGTGGGGCTGGTTGCTGTCTTTACGTTTCACAACCATG GAAGGACTGCCAACCTCTACTCCCTTCACAGCTGGCTGGGCATCACCACTGTCTTCCTCTCTCGCCTGCCAGTGGT TCCTGGGCTTTGCTGTCTCCTCCTGCCCTGGGCGTCCATGTGGCTGCGCAGCCTCCTAAAACCTATCCACGTCT TTTTTGGAGCCGCCATCCTCTCTCTCTCCATCGCATCCGTCATTTCGGGCATTAATGAGAAGCTTTTCTTCAGTT TGAAAAACACCACCAGGCCATACCACAGCCTGCCCAGTGAGGCGGTCTTTGCCAACAGCACCGGGATGCTGGTGG TGGCCTTTGGGCTGCTGGTGCTCTACATCCTTCTGGCTTCATCTTGGAAGCGCCCAGAGCCGGGGATCCTGACCG AGCCCTACAAATCCTGGTGACCTGCTCTCCCAAGAACAGAGCCTGTCCCCAGATGTCCCAGTAGCGATGAGCTAAC AGAGGTGGCTGTGGACTTCCTCTTCTTCTTGCTGGATCAGGGCCTTCCTGCCTCCCGCTGGGCAGGTCTGGC CTTGCTCTCTGGCAGGGCCCCAGCCCCTCTGACCACTCTGCAGCTCACCATGCAGCTGATGCCAAAGTTGTGGT GTCCAGTGTGCAGCAGCCCTGGGAGCCACTGCCACCTTCAGAGGGGGTTCCTTGCTGAGACCCACATTGCTTCACC TGGCCCCACCATGGCTGCCTGGCCCAACCTAGCGTTCTGTGCCATGCTAGAGCTTGAGCTGTTGCTCTTCT TCAGGGGAGGAAATAGGGTGG

3500/6881 FIGURE 3228A

AAAGGGCCAGAGGTAGACATTGAAGGTCCTGAAGGGAAGCTCAAAGGTCCCAAGTTTAAGATGCCTGATGTACAT TTCAAAAGCCCACAAATCTCCATGAGTGACATTGATTTGAATTTGAAAGGACCTAAGATAAAAGGAGATATGGAC ATTTCCGTTCCTAAACTGGAGGGAGATCTGAAAGGTCCCAAAGTGGATGTCAAAGGCCCTAAAGTGGGCATTGAC ACTCCTGATATTGACATTCATGGTCCAGAAGGGAAACTGAAGGGCCCCAAATTTAAAATGCCTGACTTACACCTC ${\tt AAGGCACCGAAGATCTCTATGCCTGAAGTTGACCTGAATCTGAAAGGTCCAAAGGTGAAGGGCGACATGGACATT}$ TCTCTGCCCAAAGTGGAAGGCGACCTCAAGGGCCCCGAAGTTGACATCAGGGACCCCAAAGTGGACATTGATGTC CCAGATGTGGACGTTCAAGGCCCAGACTGGCACCTAAAAATGCCCAAAGTGAAAATGCCCAAGTTCAGCATGCCT GGCTTCAAAGGAGGGCCCAGATGTGGATGTGAACCTGCCCAAGGCTGACATTGATGTCTCAGGACCCAAAGTG GACGTTGATGTTCCTGATGTGAATATCGAAGGTCCAGATGCGAAACTAAAGGGCCCCAAGTTCAAGATGCCTGAG ATGAGCATCAAAGCCCCCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAGGGCGAT GTGGATGTTACCCTTCCTAAAGTGGAAGGTGACCTCAAGGGCCCAGAAGCTGACATCAAGGGCCCAAAAGTGGAC ATCAACACCCCTGATGTGGATGTTCATGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAATTC AGCATGCCTGGCTTCAAAGGAGAAGGTCCAGATGTGGATGTGAGCCTGCCCAAGGCCGACATCGATGTCTCGGGA CCCAAGGTGGACGTTGATATTCCAGATGTGAATATCGAAGGTCCAGACGCAAAACTGAAGGGCCCCAAGTTCAAG ATGCCTGAAATAAATATCAAAGCTCCCAAGATCTCCATACCTGATGTTGACCTGGATTTGAAAGGACCCAAAGTA AAAGGAGATTTTGATGTCTCTCTCAAGGTTGAAGGGACTTTGAAAGGCCCAGAAGTAGATCTTAAAGGTCCA CGTCTGGATTTCGAAGGCCCTGATGCCAAACTCAGTGGCCCATCTTTGAAGATGCCATCGCTGGAGATATCTGCT CCTAAAGTAACTGCTCCTGATGTTGATTTGCATCTCAAGGCACCAAAAATTGGATTTTCAGGTCCGAAGTTAGAA GGTGGTGAAGTGGACCTCAAGGGACCCAAAGTTGAAGCTCCAAGCTTAGATGTACACATGGACAGCCCAGATATT AACATCGAAGGCCAGATGTTAAAATCCCCAAATTTAAGAAACCCAAGTTTGGATTTGGGGCAAAAAGCCCCAAA GCTGACATCAAGTCACCTTCACTGGATGTCACTGTTCCTGAGGCAGAGCTGAACCTTGAGACTCCTGAAATTAGT GTTGGTGGCAAGGCCAAGAAAGTTAAGTTTAAAATGCCTAAAATTCATATGAGTGGTCCTAAGATTAAGGCCAAA AAACAGGGATTTGACCTGAATGTTCCTGGGGGTGAAATTGATGCCAGCCTCAAGGCTCCGGATGTAGATGTCAAC ATCGCAGGCCGGATGCTGCACTCAAAGTCGACGTGAAATCGCCCAAAACCAAGAAAACGATGTTTGGAAAAATG TACTTCCCAGATGTAGAGTTTGACATTAAATCACCTAAATTTAAAGCTGAGGCCCCTCTCCCTAGCCCCAAACTG GAGGGTGAACTCCAGGCACCTGATCTGGAACTTTCTTTGCCAGCGATTCACGTCGAAGGTCTTGACATCAAGGCG AAGGCTCCCAAGGTCAAGATGCCAGATGTGGACATCTCAGTGCCAAAAATAGAGGGTGACCTGAAAGGCCCCCAAA GTGCAGGCAAACTTGGGTGCACCTGACATCAACATCGAAGGCCTAGATGCTAAAGTCAAAACACCGTCCTTCGGC ATTTCTGCCCCTCAAGTCTCCATCCCTGATGTGAAAGTTGAAAGGACCAAAGATAAAGGGTGATGTCCCC AGCGTGGGACTGGAAGGACCAGATGTAGATCTGCAAGGTCCAGAAGCAAAAATTAAGTTCCCCAAGTTTTCCATG CCCAAGATCGGCATCCCAGGTGTGAAAATGGAGGGTGGGGGGGCCGAGGTCCATGCCCAGCTACCCTCTTGAA GGAGACTTGAGAGGACCAGATGTTAAGCTCGAAGGGCCCGATGTTTCTCTAAAGGGGCCAGGAGTAGACTTGCCT TCAGTGAACCTCTCTATGCCAAAAGTCTCTGGGCCTGACCTTGATCTGAACTTGAAAGGACCAAGTTTGAAGGGA GACCTGGATGCATCTGTTCCCAGCATGAAGGTGCATGCTCCAGGGCTCAACCTCAGTGGTGTCGGTGGCAAAATG CAGGTGGAGGAGACGGTGTGAAAGTGCCAGGGATCGATGCCACAACAAGCTTAACGTTGGGGCACCAGATGTG ACACTGAGGGGACCAAGCCTGCAGGGAGATCTGGCTGTCTCTGGTGACATCAAATGCCCTAAAGTATCCGTAGGA GCTCCTGATCTAAGCTTGGAGGCATCCGAAGGCAGCATTAAACTTCCCAAAATGAAGCTGCCCCAATTTGGCATC TCTACTCCGGGGTCCGACTTGCACGTCAATGCCAAGGGGCCACAGGTTTCTGGCGAACTGAAGGGGCCAGGTGTG GATGTGAACCTGAAAGGGCCTCGGATTTCAGCACCGAATGTGGACTTTAACTTGGAAGGACCAAAAGTGAAAGGG AGCCTTGGGGCCACTGTGAGATCAAAGGCCCCACTGTCGGAGGAGGTCTTCCAGGCATTGGTGTTCAAGGCCTA GAAGGAAACCTCCAGATGCCTGGAATTAAGTCCTCTGGATGTGATGTGAACCTGCCAGGCGTGAATGTGAAACTC CCAACTGGGCAGATTTCTGGGCCTGAAATCAAAGGTGGTCTGAAAGGTTCAGAAGTAGGTTTCCATGGGGCTGCT CCTGATATCAGTGTGAAGGGCCTGCCTTTAATATGGCATCTCCTGAGTCAGATTTTGGCATCAACTTGAAGGGC CCAAAAATCAAAGGAGGTGCGGATGTTTCAGGGGGGTGTCAGTGCCCCAGACATCAGCCTTGGTGAAGGGCATTTG AGTGTTAAAGGTTCCGGGGGTGAGTGGAAGGGACCCCAAGTCTCCTCTGCTCTCAACTTGGACACATCTAAGTTT GCTGGGGGCCTTCATTTCTCAGGACCAAAGGTGGAAGGAGGTGTGAAAGGAGGTCAGATTGGACTCCAGGCTCCT GGGCTGAGTGTCTGGGCCTCAAGGTCACTTGGAAAGTGGATCTGGAAAAGTAACATTCCCTAAAATGAAGATC CCCAAATTTACCTTCTCTGGCCGTGAGCTGGTTGGCAGAGAAATGGGGGTGGATGTTCACTTCCCTAAAGCAGAG

3501/6881 FIGURE 3228B

MPKVKMPKFSMPGFKGEGPDVDVNLPKADIDVSGPKVDVDVPDVNIEGPDAKLKGPKFKMPEMSIKAPKISMPDI DLNLKGPKVKGDVDVTLPKVEGDLKGPEADIKGPKVDINTPDVDVHGPDWHLKMPKVKMPKFSMPGFKGEGPDVD VSLPKADIDVSGPKVDVDIPDVNIEGPDAKLKGPKFKMPEINIKAPKISIPDVDLDLKGPKVKGDFDVSVPKVEG TLKGPEVDLKGPRLDFEGPDAKLSGPSLKMPSLEISAPKVTAPDVDLHLKAPKIGFSGPKLEGGEVDLKGPKVEA PSLDVHMDSPDINIEGPDVKIPKFKKPKFGFGAKSPKADIKSPSLDVTVPEAELNLETPEISVGGKGKKSKFKMP KIHMSGPKIKAKKQGFDLNVPGGEIDASLKAPDVDVNIAGPDAALKVDVKSPKTKKTMFGKMYFPDVEFDIKSPK FKAEAPLPSPKLEGELQAPDLELSLPAIHVEGLDIKAKAPKVKMPDVDISVPKIEGDLKGPKVQANLGAPDINIE GLDAKVKTPSFGISAPOVSIPDVNVNLKGPKIKGDVPSVGLEGPDVDLOGPEAKIKFPKFSMPKIGIPGVKMEGG GAEVHAQLPSLEGDLRGPDVKLEGPDVSLKGPGVDLPSVNLSMPKVSGPDLDLNLKGPSLKGDLDASVPSMKVHA PGLNLSGVGGKMOVGGDGVKVPGIDATTKLNVGAPDVTLRGPSLOGDLAVSGDIKCPKVSVGAPDLSLEASEGSI KLPKMKLPQFGISTPGSDLHVNAKGPQVSGELKGPGVDVNLKGPRISAPNVDFNLEGPKVKGSLGATGEIKGPTV GGGLPGIGVOGLEGNLOMPGIKSSGCDVNLPGVNVKLPTGOISGPEIKGGLKGSEVGFHGAAPDISVKGPAFNMA SPESDFGINLKGPKIKGGADVSGGVSAPDISLGEGHLSVKGSGGEWKGPQVSSALNLDTSKFAGGLHFSGPKVEG GVKGGQIGLQAPGLSVSGPQGHLESGSGKVTFPKMKIPKFTFSGRELVGREMGVDVHFPKAEASIQAGAGDGEWE ESEVKLKKSKIKMPKFNFSKPKGKGGVTGSPEASISGSKGDLKSSKASLGSLEGEAEAEASSPKGKFSLFKSKKP RHRSNSFSDEREFSGPSTPTGTLEFEGGEVSLEGGKVKGKHGKLKFGTFGGLGSKSKGHYEVTGSDDETGKLOGS GVSLASKKSRLSSSSSNDSGNKVGIQLPEVELSVSTKKE

CTCCGCGGGGGCGGGGTAGCTGGAGCCTGGCCTCGGCAGGAGCCGAGCTTGTTCCGGAAGAAGCCGAGC GGACGGGGCCAGCCTCAGCGTCCCGGGAGTGAGCCGATAGCTGCGGCGGCCGACAGCGCGGGCCGGGATGAACCG CGACGCTGAGGCAGCGGAGGTGCCGGCTGCGGGGCCCCAGTGAGACTCCCTCGAAGCGGCAGCCCACCGTTCG ACGGCCATGGCCGACATGTACCGGGTGGGAGATTACGTCTATTTTGAGAACTCTTCCAGCAATCCTTACCTG GTTAGACGGATTGAGGAGCTCAACAAGACTGCAAATGGAAATGTGGAGGCAAAGGTTGTCTTTTTCCGGCGC AGGGACATTTCTAGTAGCCTCAACAGCCTGGCTGATAGTAATGCCAGGGAGTTTGAAGAGGAATCAAAGCAGCCA GCCACCCACATACGGGGGAAATGCAGTGTGACCCTCTTGAATGAGACAGATATCTTGAGCCAGTACCTGGAAAAG GAGGACTGCTTTTTTTACTCACTGGTGTTTGACCCCGTGCAGAAGACACTTCTCGCTGATCAGGGCGAGATTAGA GTTGGTTGCAAATACCAAGCTGAGATCCCAGATCGCCTAGTAGAGGGAGAATCTGATAATCGGAACCAGCAGAAG ATGGAGATGAAGGTCTGGGACCCAGACAACCCTCTCACAGACCGGCAGATCGACCAGTTTCTTGTGGTGGCCCGA GCTGTGGGAACCTTTGCAAGAGCCCTAGATTGTAGCAGCTCCATTCGGCAGCCAAGCTTGCACATGAGTGCAGCT GCTGCCTCCCGAGATATCACTCTGTTTCACGCCATGGATACCTTGCAAAGGAACGGCTACGACCTGGCTAAGGCC ATGTCGACCCTGGTACCCCAGGGAGGCCCGGTGCTGTGTCGGGATGAGATGGAGGAATGGTCAGCCTCAGAGGCC ATGCTATTTGAGGAGGCCCTAGAGAAGTATGGGAAGGACTTCAATGATATTCGCCAGGATTTTCTACCCTGGAAG TCACTTGCCAGCATAGTCCAGTTTTATTACATGTGGAAAACCACAGACCGGTATATTCAGCAGAAAAGGTTGAAA GCTGCTGAAGCAGACAGCAAACTGAAACAGGTCTACATTCCCACCTACACTAAGCCAAACCCTAACCAGATCATT TCTGTGGGTTCAAAACCTGGCATGAATGGGGCTGGATTTCAGAAGGGCCTGACTTGTGAGAGTTGCCACACCACA CAGTCTGCTCAGTGGTATGCCTGGGGCCCACCTAACATGCAGTGCCGCCTCTGTGCTTCCTGTTGGATCTACTGG AAGAAGTATGGGGGACTGAAGACCCCAACTCAGCTTGAGGGGGCCACTCGGGGCACCACGGAGCCACACTCAAGG GGTCATTTATCCAGACCTGAAGCTCAAAGTCTCTCTCTTACACAACCAGCGCCAACAGGGCCAAGCTACTGGCT AAGAACAGACAAACTTTCCTGCTTCAGACCACAAAGCTGACCCGTCTTGCCAGACGCATGTGCAGGGACCTATTA CAGCCAAGGAGGGCCGCCGACGGCCTTATGCTCCTATCAATGCCAATGCCATCAAAGCAGAGTGCTCCATTCGA CTTCCTAAGGCCGCCAAGACTCCATTGAAGATTCACCCTCTGGTGCGGCTGCCCCTGGCAACTATCGTCAAAGAT CTGGTGGCCCAGGCACCCTGAAACCAAAAACACCTCGGGGTACCAAGACACCGATCAACAGAAACCAGCTGTCC CAGAACCGGGGACTGGGGGGCATTATGGTGAAACGGGCCTATGAGACTATGGCAGGGGCAGGGGTTCCTTTCTCT GCTGATGCCCCCAATCCTGTGGTGTTTTGTGGCCACAAAGGATACCAGGGCCCTACGGAAGGCTĆTGACCCATCTG GAAATGCGGCGAGCTGCTCGCCGACCCAACTTGCCCCTGAAGGTGAAGCCAACGCTGATTGCAGTGCGGCCCCCT GTCCCTCTACCTGCACCCTCACATCCTGCCAGCACCAATGAGCCTATTGTCCTGGAGGACTGAGCACCTGTGGGG AAGGGAGGTGGGCTGAGAGGGTGGATGCCCAGGGCACCCAAACCTCCCTTTCCTTTCGTGTCGAAGGGA GTGAGGAGTGAATTAAGGAAGAGCAAGTGAGTGTGTCCCTGGAGGGGTTGGGCGCCCTCTGGTGTTACCAC CTCGAGACTTGTCTCATGCCTCCATGCTTGCCGATGGAGGACAGACTGCAGGAACTTGGCCCATGTGGGAACCTA GCCTGTTTTGGGGGGTAGGACCCACAGATGTCTTGGACAGTTTTTGGGGGGGAGGGTTTTTTAATTTTTTAAAAGTT TTGCCTCCCTTTGTGAAAGGGGATGGGGAGGGAAGAGTAAACAGATAACAGGTGGTGGTACCTGGTTGGGGGAG TCCCTCCCCTCTCCCCTTTTGTACGCCAGTTCTCAGAAATAAAGATCTTTTGTCCGTTTTTTTAACCTCG GATTCTGTAATTGGTTCTTATAGTAACAAATAAAAAGCTGTTTTCTTCAGCTTCTCCTGG

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SRDITLFHAMDTLQRNGYDLAKAMSTLVPQGGPVLCRDEMEEWSASEAMLFEEALEKYGKDFNDIRQDFLPWKSL
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 ${\tt GCAAACTCTGCACAAG} {\color{red} {\bf ATC}} {\tt GCGGCGGTAGCGGCAGTGGCGCGCGTAGGAGGCGGTCTTGGGCGTACT}$ GGCTTTTTTAGGGGTCTGCCTGGGGATTACCCTTGCTGTGGATAGAAGCAACTTTAAGACCTGTGAAGAGAGTTC TTTCTGCAAGCGACAGAGAAGCATACGGCCAGGCCTCTCTCCATACCGAGCCTTGCTGGACTCTCTACAGCTTGG TCCTGATTCCCTCACGGTCCATCTGATCCATGAGGTCACCAAGGTGTTGCTGGTGCTAGAGCTTCAGGGGCTTCA AAAGAACATGACTCGGTTCAGGATTGATGAGCTGGAGCCTCGGCGACCCCGATACCGTGTACCAGATGTTTTGGT GGCTGATCCACCAATAGCCCGGCTTTCTGTCTCTGGTCGTGATGAGAACAGTGTGGAGTTAACCATGGCTGAGGG ACCCTACAAGATCATCTTGACAGCACGGCCATTCCGCCTTGACCTACTAGAGGACCGAAGTCTTTTGCTTAGTGT CAATGCCCGAGGACTCTTGGAGTTTGAGCATCAGAGGGCCCCTAGGGTCTCTTTCTCGGATAAGGTTAATCTCAC GCTTGGTAGCATATGGGATAAGATCAAGAACCTTTTCTCTAGGCAAGGATCAAAAGACCCAGCTGAGGGCGATGG GGCCCAGCCTGAGGAAACACCCAGGGATGGCGACAAGCCAGAGGAGACTCAGGGGAAGGCAGAAAAGATGAGCC AGGAGCCTGGGAGGAGACATTCAAAACTCACTCTGACAGCAAGCCGTATGGCCCCATGTCTGTGGGTTTGGACTT CTCTCTGCCAGGCATGGAGCATGTCTATGGGATCCCTGAGCATGCAGACAACCTGAGGCTGAAGGTCACTGAGGG TGGGGAGCCATATCGCCTCTACAATTTGGATGTGTTCCAGTATGAGCTGTACAACCCAATGGCCTTGTATGGGTC TGTGCCTGTGCTCCTGGCACACCCTCATCGCGACTTGGGCATCTTCTGGCTCAATGCTGCAGAGACCTGGGT TGATATATCTTCCAACACTGCCGGGAAGACCCTGTTTGGGAAGATGATGGACTACCTGCAGGGCTCTGGGGAGAC TGATGTTTTCCGGCAATATGCTAGTCTCACAGGAACCCAGGCGTTGCCCCCACTCTTCTCCCTCGGCTACCACCA GAGCCGTTGGAACTACCGGGACGAGGCTGATGTGCTGGAAGTGGATCAGGGCTTTGATGATCACAACCTGCCCTG TGATGTCATCTGGCTAGACATTGAACATGCTGATGGCAAGCGGTATTTCACCTGGGACCCCAGTCGCTTCCCTCA GCCCCGCACCATGCTTGAGCGCTTGGCTTCTAAGAGGCGGAAGCTGGTGGCCATCGTAGACCCCCACATCAAGGT GGACTCCGGCTACCGAGTTCACGAGGAGCTGCGGAACCTGGGGCTGTATGTTAAAACCCGGGATGGCTCTGACTA TGAGGGCTGGTGCTGGCCAGGCTCAGCTGGTTACCCTGACTTCACTAATCCCACGATGAGGGCCTGGTGGGCTAA GTTCAATGGTCCTGAGGTCACCATGCTCAAGGATGCCCAGCATTATGGGGGCTGGGAGCACCGGGATGTGCATAA CATCTATGGCCTTTATGTGCACATGGCGACTGCTGATGGGCTGAGACAGCGCTCTGGGGGGCATGGAACGCCCCTT TGTCCTGGCCAGGGCCTTCTTCGCTGGCTCCCAGCGCTTTGGAGCCGTGTGGACAGGGGACAACACTGCCGAGTG GGACCATTTGAAGATCTCTATTCCTATGTGTCTCAGCTTGGGGCTGGTGGGACTTTCCTTCTGTGGGGCGGATGT GGGTGGCTTCTTCAAAAACCCAGAGCCAGAGCTGCTTGTGCGCTGGTACCAGATGGGTGCTTACCAGCCATTCTT CCGGGCACATGCCCACTTGGACACTGGGCGACGAGAGCCATGGCTGTTACCATCTCAGCACAATGATATAATCCG AGATGCCTTGGGCCAGCGATATTCTTTGCTGCCCTTCTGGTACACCCTCTTATATCAGGCCCATCGGGAAGGCAT TCCTGTCATGAGACCCCTGTGGGTGCAGTACCCTCAGGATGTGACTACCTTCAATATAGATGATCAGTACTTGCT TGGGGATGCGTTGCTGGTTCACCCTGTATCAGACTCTGGAGCCCATGGTGTCCAGGTCTATCTGCCTGGCCAAGG GAAGGATGACCCCATCACTCTTTGTTGCACTTAGCCCTCAGGGTACAGCTCAAGGAGAGCTCTTTCTGGATGA TGGGCACACGTTCAACTATCAGACTCGCCAAGAGTTCCTGCTGCGTCGATTCTCATTCTCTGGCAACACCCTTGT CTCCAGCTCAGCAGACCCTGAAGGACACTTTGAGACACCAATCTGGATTGAGCGGGTGGTGATAATAGGGGGCTGG AAAGCCAGCAGCTGTGGTACTCCAGACAAAAGGATCTCCAGAAAGCCGCCTGTCCTTCCAGCATGACCCTGAGAC $\tt CTCTGTGTTGGTCCTGCGCAAGCCTGGCATCAATGTGGCATCTGATTGGAGTATTCACCTGCGA\underline{TAA}$

MAAVAAVAARRRRSWASLVLAFLGVCLGITLAVDRSNFKTCEESSFCKRQRSIRPGLSPYRALLDSLQLGPDSLT
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PWHLEASCTLVAVMAEGSLLPPALGNMHEVFSQLAPFEVRLLLLSVWGFLREHGPLPQKFIFQSERGRFIRDFSR
EGGGEGGPHLAVLHSVLHRNIDRLGLFSGRFQAPSPSTLLRQGT

GAGGAACATGATTTTATTGGTTCTTTCAGTTCACCACATCCGACTCGCGTCTCGGCCCTGGCCCGCCTTGCGGAC CTTAAAGCAGTCAGGGTTTGGGGGAAACGTGCTCACCCGACGGCAGCTCACAGGACCCCGGAGAGTCCTG GCATGGTATCTCGGTCCGGACTCTCCGCTGGGCCCACGAAGGAGAAAGGCTGCCTCGGATTCCTGCGCCCAAGCC AAGGTCCGGCGCCCACGGAGGCAAGTCCGGTCTCACGGTGACCTCCCGCTGGCGCCCCTTCGCCGCCAACCATC CAGTTCTTCCTCCAGGCCACGTTCTCCTGCGTGGTCGCTGCCTCCTGCAGAGTGGCCAGCAATAGCTGCTGGGTC CTGGCCGCCTCCTCCCTGCTCCTTGGGTCCTGCAGTGGCATCTCCTGAGGGCAGGAAGGGGAGTTCGCAGGAGCT CCAGTCCGGGGCTCTCCACCCGCCCACCCTTCCTCGGGACTACCAGTTGCTTCTACCTTTAGCATTTCCTGCTTC CGCCGCTCTCCCGGGGTCACGATAACGAGGAGCGCGTAGCCCACGCCAGCCCTGCGCCCAGCATTGCGACTGAG AAGCTGTTGCCGCGCGGTCTCACTACCCCTTGGCGCAGGCTAGAGCGCCCTATAGCAGAAACCATAGATAAGCGG CAGGTGTCCAAGAAGTGCTGGCACCAAGGGCTGAGCGCGGGGACCCTGTGTCCTCAATTCCGGGGTGGGATTGCT AGGGGGAGAGTGCGTGTCTTCATGGTTGCCGTGGGTTTTATGATTGCCCATTTTTCTGTCTTCCGACGTTTCCCG ATCAGTAGAGGCCCGAGCTGTGCTCTGTGGTTTCCTGCAGTCACCCGCGAGTTTTCAACACAGCGCATGGAGGGC ACAAGGTCTCGCTCTGTCGCCCAGGGCTGGAGTGCAGTGGCGCGATCATGGCTCACTGAAGCCTCGACTTCCAGG GCCCAAGCGATCCTCCTGCCTCAACCTCCCGGATAGCTGGGATTACAGGCGTGCACCACCACCACGCCCGGCTGGTAT TGGCGTGATCTCGGCTCACTGCAAGCTCTGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGC TGGGACTACAGGCGCCCCCCCCCCCCGCCTAATTTTTTGTATTTTTAGTAGAGAAAGAGTTTCACTATGTAG GTCAGGCTGGTCTCGAACTCCTGACCTCGTGATCCGCCCAATCCGCCCACCTCGGCCTCCCAAAGTGCTGGGATT ACAGGTGTGAGCCACCGCGCCCGGCTGTTTTGCTTTGTTTTCAACCACTAAAAGGCTGGATTCGTGTAACATACT GAATTCTGCTTTACAGAAGAAAACACCTCTTAGCTGTGTGACTGATTATAGGCAAGTTCTTGTGCCCCGGTTTCT GCATCAGAAAATGAAGCTTATAACAACAGTACTTGTCTCACAGTTTTAGGATAATTAAATTAGTTATATGTAAAG CAATTAAAACAGCTCCTGCCAAAGAGTAAACACCATATAAATATTCATTAAATAACATACAAACATACCAGGTTG GGAAAAATCAGTAAGCATAGGAGTCAGGAAATTCCAAGTTGGTTATCACAACTCTTGGCCCACAGGGCTTTAATC ACCTCTTGGGCATTTTCCCCTGCCCTGAAAGCGTATAATCGCTTAGCACAGTCGGTGCTTAAGGGGCCCAGGCTCC AAAGAAGATTAAAGGAACAGTTTGTGGGGTGCACTGGGCAGCAGTACTCTCCTCTGAGTTCAATCATCTTGCACT CTAAGAATCACCACCATGGCCCTTGTGCCAGGGAGAAGCAAGGAGGATGGGCTTTGGACTAGAAATAGCCCAGGC TCCTCCCAGCATCCAGAAAGTCCCAGGCTGCCCAACCCTCTCTGGGACAGAGAAAAATTGGCAAGGTTGAAGGT GAGAGTGGGGATCTCCATTTGCCCCATGAGGAGCTGCTGCTGCTCACTGATGGTGAGGAAGAGAGGATGCTGAGGCC TTCTTCCAAGACCAAAGTGAAGAGCCAGGCTGGGCTTGGAGCCCACAGGACCCTAGAAGTCCTTTAAGAACATTT AACGCTGGACTCAGCTGGGGGCAGGACCAGG<u>ATG</u>AAGAAGATGCTTGTTGGATTCTTGAGGACACAGCATGTCTG GAAGCCACCAACCACTGTCCCTTCTGGGACTCAACAGGCTCCCGTGTTTGTAGAAGTGGCTTTGTGGAATATTCC CATCTCCTGCCTCCTAATAGCTTTGAGGGAGCTGAAGAAGAAGCTGTTCAAACGCCGGCGGGTGTTGAATCGGGA GCGGCGTCTGAGGCACCGGGTGGTCGGGGCTGTGATAGACCAAGGGCTGATCACGCGGCACCACCTCAAGAAGCG GGCGTCCAGTGCACGTGCCAACATTACACTGTCAGGGAAGAGCGCAGAAAACTCCTCCAGCAGATCCGGCTTGC AAGATTCTCAACTGGAGCCAGCCTTCAGACTCAGTGGTTGTTTCAGAGGACTTTGACAAAAGCAAGGCCCCTTTT CAGAAGAAGATTGGAGAAGGGCCTCTCTAGCAGTCAACTCCATTTGTAATAAAGCCCTAGCACTCTGAAAAAAA ΑΑΑΑΑΑΑΑΑΑ

 $\label{thm:light} {\tt MKKMLVGFLRTQHVWKPPTTVPSGTQQAPVFVEVALWNIPISCLLIALRELKKKLFKRRRVLNRERRLRHRVVGA$$ {\tt VIDQGLITRHLKKRASSARANITLSGKKRRKLLQQIRLAQKEKTAMEVEAPSKPARTSEPQLKRQKKTKAPQDVEMKDLEDES}$

GCTGACCCTTCCCGCCCTCCTTCTCGTCACACACCAGGTCCCCGCGGAAGCCGCGGTGTCGGCGCCCATG CTGACGGCTCTTGAGAGTCTCATCGAGATGGGCTTCCCCAGGGGACGCGCGGAGAAGGCTCTGGCCCTCACAGGG AACCAGGGCATCGAGGCTGCGATGGACTGGCTGATGGAGCACGAAGACCACCCCGATGTGGACGAGCCTTTAGAG ACTCCCCTTGGACATATCCTGGGACGGGAGCCCACTTCCTCAGAGCAAGGCGGCCTTGAAGGATCTGGTTCTGCT ${\tt GCCGGAGAAGGCAAACCCGCTTTGAGTGAAGAGGAAAGACAGGAACAAACTAAGAGGATGTTGGAGCTGGTGGCC}$ CAGAAGCAGCGGGAGCGTGAAGAAAGAGAGGGAACGGGAGGCATTGGAACGGGAACGGCAGCGCAGGAGACAAGGG GAGCCTCCCACCAAGCGGGAGTATGACCAGTGTCGCATACAGGTCAGGCTGCCAGATGGGACCTCACTGACCCAG ACGTTCCGGGCCCGGGAACAGCTGGCAGCTGTGAGGCTCTATGTGGAGCTCCACCGTGGGGAACATAGGTGGG GGCCAGGACCCTGTGCAATTGCTCAGTGGCTTCCCCAGACGGCCTTCTCAGAAGCTGACATGGAGCGGCCTCTG CAGGAGCTGGGTATGGCTGCAAGACTAGAAACCAGGACTAGAAACTGGGGGGAGTAGGGAGGCATGCCTAGGAAAA GGAGGGATGCAAAGAGAGGGGCTTTG**TGA**ACATGGTGCAAGGCCAGGAATTTTGGGAGCAAAAACCAAGTATCC TTGTGGTTCAAGCCTGTTTTCTTCCATCTTCAGGACTCGTGCCTTCTGCTGTTCTCATTGTGGCCAAGAAATGTC

MAELTALESLIEMGFPRGRAEKALALTGNQGIEAAMDWLMEHEDDPDVDEPLETPLGHILGREPTSSEQGGLEGS GSAAGEGKPALSEEERQEQTKRMLELVAQKQREREEREEREALERERQRRRQGQELSAARQRLQEDEMRRAAEER RREKAEELAARQRVREKIERDKAERAKKYGGSVGSQPPPVAPEPGPVPSSPSQEPPTKREYDQCRIQVRLPDGTS LTQTFRAREQLAAVRLYVELHRGEELGGGQDPVQLLSGFPRRAFSEADMERPLQELGMAARLETRTRNWGSREAC LGKGGMQREGAL

GGCACGAGGCCTAAGAGTTCCTCTGCTGTACGACTGCACTCCCGCACCCTCCCCAAATCCCCCCTCTTCGGCCT GTACTTAATTCTTACACTGTGGACGCTCTCTCGCGCCCCGCCATCCCCCGACCCCTCTGATCTCCGATCCTTGACG ATGTCTAGCCTGCATTGATTGGCCCTTTTCCCTGGGTATGGCAGATCTATTGCTTGATGATCCTCTCCCCCAAG AATTCTAACACAGGAGCTGTCCTGAGGCTCTGGATGACTTTATTCTTCAAATGGCTTTACCCTCCCAGTAGCTCC AGGGACCCTCCATTTTCCATATCCAGGAAAATGTGATGCGCCACAGGTATCAGCGTCTGGATCGCCACTTCACGT ACCAAAAGGAGGAAGCTGGGGAAAAAGAGGTGTGCGGAGACCAGATCAAAGGACCGGACAAAGAGGAGGAACCAC AAGTCTTGGCAGGCCGTGCCGCAGGCTGCTGCAGTTTTGGGGTGCTCTTCTGCACCATCCTCCTTTTTGCTCT GGGTGTCTGCTCTATGGCTCCTTCTACTATTCCTATATGCCGACAGTCAGCCACCTCAGCCCTGTGCATT TCTACTACAGGACCGACTGTGATTCCTCCACCACCTCACTCTGCTCCTTCCCTGTTGCCAATGTCTCGCTGACTA ${\tt AGGGTGGACGTGATCGGGTGCTGATGTATCGACCCGTATCGTGTTACCTTAGAGCTTGAGCTGCCAGAGTCCCC}$ CTGTGAATCAAGATTTGGGCATGTTCTTGGTCACCATTTCCTGCTACACCAGAGGTGGCCGAATCATCTCCACTT TGCCGACCACTGGAGCGATCATTGAGATCCACAGCAAGCGCATCCAGCTGTATGGAGCCTACCTCCGCATCCACG $\tt CGCACTTCACTGGGCTCAGATACCTGCTATACAACTTCCCGATGACCTGCGCCTTCATAGGTGTTGCCAGCAACT$ ATCCCTCAGGGACAGAGGGTCAGCTGTCCGAGGAGGAGAAACCAGATCAGCAGCCCCTGAGCGGAGAAGAGGAGC $\tt CTGCTCCTGCTTCTGCCCCTGTCCTAGAGACTCTGGGCAGCTCTGAACCTGCTGGGGGGTGCTCTCCGAC$ ${\tt AGCGCCCACCTGCTCTAGTTCC} \underline{{\tt TGA}} {\tt AGAAAAGGGGCAGACTCCTCACATTCCAGCACTTTCCCACCTGACTCCT}$

MSTEKVDQKEEAGEKEVCGDQIKGPDKEEEPPAAASHGQGWRPGGRAARNARPEPGARHPALPAMVNDPPVPALL WAQEVGQVLAGRARRLLLQFGVLFCTILLLLWVSVFLYGSFYYSYMPTVSHLSPVHFYYRTDCDSSTTSLCSFPV ANVSLTKGGRDRVLMYGQPYRVTLELELPESPVNQDLGMFLVTISCYTRGGRIISTSSRSVMLHYRSDLLQMLDT LVFSSLLLFGFAEQKQLLEVELYADYRENSYVPTTGAIIEIHSKRIQLYGAYLRIHAHFTGLRYLLYNFPMTCAF IGVASNFTFLSVIVLFSYMQWVWGGIWPRHRFSLQVNIRKRDNSRKEVQRRISAHQPGAGPEGQEESTPQSDVTE DGESPEDPSGTEGQLSEEEKPDQQPLSGEEELEPEASDGSGSWEDAALLTEANLPAPAPASASAPVLETLGSSEP AGGALRQRPTCSSS

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GGCACGAGGGAGCGCTTGGGAGTTAGGTTGTTTGCCGGCGTAGCGGCCAGCGCCTGAGCCCGCCGTTGATCTTCG GAAAGGCCGGGGTCCCTTCCGGTGGAAATATGGTGAAGGAAACCGTAGGTCTGGAAGAGGCGGTTCTGGTATTCG GTCTTCCCGCCTTGAGGAAGATGATGGAGATGTGGCAATGAGTGATGCCCAGGATGGTCCCCGAGTACGATACAA CCCCTATACCACCCGACCTAACCGTCGGGGTGATACTTGGCATGATCGAGATCGCATTCATGTTACTGTGCGGAG AATTCCTTATGGCAGAAAGTATGACAAGGCATGGCTCCTGAGCATGATTCAGAGCAAGTGCAGTGTGCCCTTCAC CCCTATTGAGTTTCACTATGAGAATACACGGGCCCAGTTCTTCGTTGAAGACGCCAGTACTGCCTCTGCATTGAA CACTATACTGAATGAACTGAAGCCAGAACAAGTAGAACAGCTAAAGCTGATCATGAGCAAACGATACGATGGCTC $\verb|CCAACAAGCCCTTGACCTCAAAGGCCTCCGTTCAGACCCAGATTTGGTGGCCCAGAACATTGACGTTGTCCTGAA| \\$ TCGCAGAAGCTGTATGGCAGCTACCCTGAGGATCATTGAAGAACATCCCTGAGCTATTGTCCTTGAACTTGAG CAACAACAGGCTGTACAGGCTGGATGACATGTCTAGCATTGTTCAGAAGGCACCCAACCTGAAGATCCTAAACCT TGGAAACTCCCTGTGTGACACCTTCCGAGACCAGTCCACCTACATCAGCGCCATTCGCGAACGATTTCCCAAGTT ACTACGCCTGGATGGCCATGAGCTACCCCCACCAATTGCCTTTGATGTTGAAGCCCCCACGACGTTACCGCCCTG CAAGGGAAGCTATTTTGGAACAGAAAACTTGAAGAGTCTGGTCTTGCACTTCCTGCAACAGTACTATGCAATTTA CGACTCTGGAGACCGACAAGGGCTCCTGGATGCCTACCATGATGGGGCCTGCTGTTCCCTGAGCATTCCTTTCAT TCCTCAGAACCCTGCCCGAAGCAGCTTAGCCGAGTATTTCAAGGATAGCAGAAATGTGAAGAAGCTTAAAGACCC TACCTTGCGGTTCCGGCTGCTGAAGCACACGCGTCTCAACGTTGTTGCCTTCAATGAGTTGCCCAAAACCCA GCACGACGTCAATTCCTTCGTGGTAGACATAAGCGCCCAGACAAGCACATTGCTGTTTTTTCTGTCAATGGAGT CAATTCAGGGCTATGTATTGTAAATGATGAGCTATTTGTGCGGAATGCCAGTTCTGAAGAGATCCAAAGAGCCTT CGCTATGCCTGCACCCACGCCTTCCTCCAGCCCGGTGCCCACCCTCTCTCCAGAGCAGCAGGAAATGTTGCAAGC ATTCTCTACCCAGTCTGGCATGAACCTCGAGTGGTCCCAGAAGTGCCTTCAGGACAACAACTGGGACTACACCAG ATCTGCCCAGGCCTTCACTCATCTCAAGGCCAAGGGCGAGATCCCAGAAGTGGCATTCATGAAG<u>TGA</u>TCGTAGTC ATGCCTCAGAAGCAGTCCCCCCTGTAAATAGTCCTTGGATATTACCGTCTGGTTGTCGTCTGTCATCTCCTCCTG GAAGACTTCAGAAGATTGAGCCTCACTGGTGCCAGGAAGCCAAAGCTTACTTTGTAGAACTGACACTAAACTACC CGAAGGACTTAGGTGCTTTGTGTACTTAACCCCAGGACCTCCTTACTTTTTAATATAAAGAGTGATGTTGTAAAA AAAAAAAAAAAA

MADEGKSYSEHDDERVNFPQRKKKGRGPFRWKYGEGNRRSGRGGSGIRSSRLEEDDGDVAMSDAQDGPRVRYNPY
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EFHYENTRAQFFVEDASTASALKAVNYKILDRENRRISIIINSSAPPHTILNELKPEQVEQLKLIMSKRYDGSQQ
ALDLKGLRSDPDLVAQNIDVVLNRRSCMAATLRIIEENIPELLSLNLSNNRLYRLDDMSSIVQKAPNLKILNLSG
NELKSERELDKIKGLKLEELWLDGNSLCDTFRDQSTYISAIRERFPKLLRLDGHELPPPIAFDVEAPTTLPPCKG
SYFGTENLKSLVLHFLQQYYAIYDSGDRQGLLDAYHDGACCSLSIPFIPQNPARSSLAEYFKDSRNVKKLKDPTL
RFRLLKHTRLNVVAFLNELPKTQHDVNSFVVDISAQTSTLLCFSVNGVFKEVDGKSRDSLRAFTRTFIAVPASNS
GLCIVNDELFVRNASSEEIQRAFAMPAPTPSSSPVPTLSPEQQEMLQAFSTQSGMNLEWSQKCLQDNNWDYTRSA
QAFTHLKAKGEIPEVAFMK

TTTCTCACCCAGTGCATGTGGCAGGAGCGGTGAGATCACTGCCTCACGGCGATCCTGGACTGACGGTCACGACTG CCTACCCTCTAACCCTGTTCTGAGCTGCCCCTTGCCCACACCCCCAAACCTGTGTGCAGGATCCGCCTCCATGG AGCTACAGCCTCCTGAAGCCTCGATCGCCGTCGTGTCGATTCCGCGCCCAGTTGCCTGGCTCACATTCGGAGGCTG GTGTCCAGGGTCTCAGCGCGGGGGACGACTCAGAGTTGGGGTCTCACTGTGTTGCCCAGACTGGTCTCGAACTCT TGGCCTCAGGTGATCCTCTCCCTCAGCTTCCCAGAATGCCGAGATGATAGAGACGGGGTCTGACTGTGTTACCC AGGCTGGTCTTCAACTCTTGGCCTCAAGTGATCCTCCTGCCTTAGCTTCCAAGAATGCTGAGGTTACAGTAGAAA CGGGGTTTCACCATGTTAGCCAGGCTGATATTGAATTCCTGACCTCAATTGATCCGACTGCCTCGGCCTCCGGAA GTGCTGGGATTACAGGCACCATGAGCCAGGACACCGAGGTGGATATGAAGGAGGTGGAGCTGAATGAGTTAGAGC CCGAGAAGCAGCCGATGAACGCGGCGTCTGGGGGCGCCCATGTCCCTGGCGGAGCCGAGAAGAATGGTCTGGTGA AGATCAAGGTGGCGGAAGACGAGGCGGAGGCGGCAGCCGCGGCTAAGTTCACGGGCCTGTCCAAGGAGGAGCTGC GCATGCTTGCTGGTGCCGTGGTCATAATCGTGCGAGCGCCGCGTTGTCGCGAGCTACCGGCGCAGAAGTGGTGGC ACACGGGCGCCTCTACCGCATCGGCGACCTTCAGGCCTTCCAGGGCCACGGCGCGGGCAACCTGGCGGGTCTGA ATGATGTCGCTCAGACTGACTTGCTGCAGATCGACCCCAATTTTGGCTCCAAGGAAGATTTTGACAGTCTCTTGC AATCGGCTAAAAAAAAGAGCATCCGTGTCATTCTGGACCTTACTCCCAACTACCGGGGTGAGAACTCGTGGTTCT TCCAGGTTCGGGACATAGAGAATCTGAAGGATGCATCCTCATTCTTGGCTGAGTGGCAAAATATCACCAAGGGCT TCAGTGAAGACAGGCTCTTGATTGCGGGGACTAACTCCTCCGACCTTCAGCAGATCCTGAGCCTACTCGAATCCA ACAAAGACTTGCTGTTGACTAGCTCATACCTGTCTGATTCTGGTTCTACTGGGGAGCATACAAAATCCTTAGTCA TGCCGGCTCAACTTCTCCGACTCTACCAGCTGATGCTCTTCACCCTGCCAGGGACCCCTGTTTTCAGCTACGGGG ${\tt ATGAGATTGGCCTGGATGCAGCCTTCCTGGACAGCCTATGGAGGCTCCAGTCATGCTGTGGGATGAGTCCA}$ TTTCCTTGTTCCGGCGGCTGAGTGACCAGCGGAGTAAGGAGCGCTCCCTACTGCATGGGGACTTCCACGCGTTCT CCGCTGGGCCTGGACTCTTCTCCTATATCCGCCACTGGGACCAGAATGAGCGTTTTCTGGTAGTGCTTAACTTTG TCCTGCTCAGCCAGCCAGGCCGTGAGGAGGGCTCCCCTCTTGAGCTGGAACGCCTGAAACTGGAGCCTCACG AAGGGCTGCTCCCCTTCCCCTACGCGGCCTGACTTCAGCCTGACATGGACCCACTACCCTTCTCCTT CCCAAATAGGGTGTTTTCTGCCTTCAAATAAAAGTCACCCCTGCATGGTG

 $\label{thm:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color:color$

 ${\tt MKLLMVLMLAALSQHCYAGSGCPLLENVISKTINPQVSKTEYKELLQEFIDDNATTNAIDELKECFLNQTDETLS} \\ {\tt NVEVFMQLIYDSSLCDLF}$

CGCCGCCGCTCCAGCGCCGCGCAGCCACCGCCGCCGCCGCCGCCGCTCTCCTTAGTCGCCGCCATGACGACCGCGTC
CACCTCGCAGGTGCGCCAGAACTACCACCAGGACTCAGAGGCCGCCATCAACCGCCAGATCAACCTGGAGCTCTA
CGCCTCCTACGTTTACCTGTCCATGTCTTACTACTATTGACCGCGATGATGTGGCTTTGAAGAACTTTGCCAAATA
CTTTCTTCACCAATCTCATGAGGAGAGGGAACATGCTGAGAAACTGATGAAGCTGCAGAACCAACGAGGTGGCCG
AATCTTCCTTCAGGATATCAAGAAACCAGACTGTGATGACTGGGAGAGCGGGCTGAATGCAATGGAGTGTGCATT
ACATTTGGAAAAAAATGTGAATCAGTCACTACTGGAACTGCACAAACTGGCCACTGACATGAAAGCCATCAAAGA
ATTGGGTGACCACGTGACCAACTTGCGCAAGATGGGAGCGCCCGAATCTGGCTTGGCGGAATATCTCTTTGACAA
GCACACCCTGGGAGACAGTGATAATGAAAGCTAAGCCTCGGGCTAATTTCCCCATAGCCGTGGGGTGACTTCCCT
GGTCACCAAGGCAGTGCATGCATGTTGGGG

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3521/6881 FIGURE 3248

 $\tt CTGGTGGGGGGAAGAAGGCTCCTGCTACCTCCCTTCCCGGCACCCTCCAGAGGGACCCTCAGTCTGGCCTTGCAA$ GGACTGTCCGCTACGCCCCATCAGGCCTGTGCCCTGTACTTGAGGGGGAACTTGAGAGAAGAGCCCTGGGGCACAG ACAGCCCACCCCAGCCAGACCAGGGCCTCCCGCCCCCTTGCAGCTGTCCCGGTCCCCTGGAAGAGCACGGACC CCTGCCAAGGCCACAGGAGTCCCCAGGAGCCCTGGTGGAGACCTCTGCAGGGGAGGAGGCCCGAGGCCAGGAGG GCCCCGCAGCCGCCAGCTGGACGTGTTGCGCCTGCGCAGCTCTTCCATGGAGATCCGAGAGAAGGGCTCCGAGT TCCTGAAGGAGGAGCTGCACAGAGCGCAGAAGGAGCTGAAGCTAAAGGACGAGGAATGTGAGCGGCTGTCCAAGG TGCGGGAGCAGCTAGAACAGGAGCTGGAAGAGCTGACGGCCAGCCTGTTTGAGGAAGCTCACAAGATGGTTCGAG AGGTGACAGCCTTGAAGACGCTGGTCATCACGTCCACCAGCCTCTCCCAACCGCGAGCTTCACCCCCAGCTGC TGAGCCCCACCAAGGCCGGGCCCCGAAAGGGCCACTCTCGCCACAAGAGCACCAGCAGCACCCTCTGCCCCGCCG TGTGTCCCGCTGCGGGACACCCCTCACCCCAGACAGAGGGGCAAGGAGGTGGACACAATCCTGTTTGCAGAGT TCCAGGCCTGGAGGGAATCCCCCACCCTGGACAAGACCTGCCCCTTCCTGGAAAGGGTGTACCGGGAGGACGTGG GCCCCTGCCTGGACTTCACGATGCAGGAGCTCTCGGTGCTGGTACGGGCCGCCGTGGAGGACAACACGCTCACCA TTGAGCCGGTGGCTTCGCAGACGCTGCCCACAGTGAAGGTGGCCGAGGTTGACTGTAGCAGCACCAACACATGTG ${\tt CCCTGAGCGGGCTGACCCGCACCGCACCGAATCCGGCTCGGGGACTCCAAAAGCCATTACTACATCTCGC}$ CATCTTCCCGGGCCAGGATCACCGCAGTGTGCAACTTCTTCACCTACATCCGCTACATCCAGCAAGGCCTGGTGC GGCAGGACGCAGAGCCCATGTTCTGGGAGATCATGAGGTTGCGGAAGGAGATGTCACTGGCCAAGCTCGGCTTCT TCCCCCAGGAGGCTTAGGGCCCGGCCCAGGCCTGAAGGGGAGCTCTGAGACAGCAGAGCAAACACCCCAGGAACA GAGGCAGCACTGAGCCACCACCACCCTCCTGGGACAGACGGGCCTGGACTTCACGGCAAGACCCCCCTCT $\tt CTTCCCCACTGGGTTCTGCCACCACCAGGAGGATTTCAAGAAAGCACCAAAGACCAGGGAGCTCGGATCCATACT$ GGTGCCTTGTTGCTGGCTTGTCTTCAGAAAGGGACTGTTCTGGGTGGCTGGATCTCCAGGGTACCCTCCACCCCA GCTGCCAAGCCCTGGGCCAGCAGCACCCCCTTGTGGCCATCCTGTGCCTTGTTCCCGGTGGCCTCCCTATTGGAC TACTAGGAGGGGCTGGCAGGGCCTCCATAGCACAGAATTGCCCCAAAGCCTTGTTAAGATGAGTCAAGACCCCTC ${\tt CCCGTCTCAGCCCTGTGCTCCTGGAGGCCCTGCTCCCAAAACCGCTGGAAGGACTGGGGCACTTTCTGCCACAGT}$ AAGGCAGGCTTTGTTGGT

AGGGGGCGCGGTGGGAGGAGTAGGAGAGACAAAAGCCGAAAGCGAAGAGGGCCCGGGCTGCACACACCGGCTGG ATCGGGAAGGGAGGGAACCAGGGGGGGGGGGCCGCGAGCGGGGGTGTCGGTGCCCACCTTCAGCTGGGAGGAG ATTCAGAAGCATAACCTGCGCACCGACAGGTGGCTGGTCATTGACCGCAAGGTTTACAACATCACCAAATGGTCC ATCCAGCACCCGGGGGCCAGCGGGTCATCGGGCACTACGCTGGAGAAGATGCAACGGATGCCTTCCGCGCCTTC CACCCTGACCTGGAATTCGTGGGCAAGTTCTTGAAACCCCTGCTGATTGGTGAACTGGCCCCGGAGGAGCCCAGC CAGGACCACGGCAAGAACTCAAAGATCACTGAGGACTTCCGGGCCCTGAGGAAGACGGCTGAGGACATGAACCTG TTCAAGACCAACCACGTGTTCTTCCTCCTCCTCCTGGCCCACATCATCGCCCTGGAGAGCATTGCATGGTTCACT GTCTTTTACTTTGGCAATGGCTGGATTCCTACCCTCATCACGGCCTTTGTCCTTGCTACCTCTCAGGCCCAAGCT GGATGGCTGCAACATGATTATGGCCACCTGTCTGTCTACAGAAAACCCAAGTGGAACCACCTTGTCCACAAATTC GTCATTGGCCACTTAAAGGGTGCCTCTGCCAACTGGTGGAATCATCGCCACTTCCAGCACCACGCCAAGCCTAAC AAGAAGAAGCTGAAATACCTGCCCTACAATCACCAGCACGAATACTTCTTCCTGATTGGGCCGCCGCTGCTCATC CCCATGTATTTCCAGTACCAGATCATCATGACCATGATCGTCCATAAGAACTGGGTGGACCTGGCCTGGCCGTC AGCTACTACATCCGGTTCTTCATCACCTACATCCCTTTCTACGGCATCCTGGGAGCCCTCCTTTTCCTCAACTTC ATCAGGTTCCTGGAGAGCCACTGGTTTGTGTGGGTCACACAGATGAATCACATCGTCATGGAGATTGACCAGGAG GCCTACCGTGACTGGTTCAGTAGCCAGCTGACAGCCACCTGCAACGTGGAGCAGTCCTTCTTCAACGACTGGTTC AGTGGACACCTTAACTTCCAGATTGAGCACCACCTCTTCCCCACCATGCCCCGGCACAACTTACACAAGATCGCC CCGCTGGTGAAGTCTCTATGTGCCAAGCATGGCATTGAATACCAGGAGAAGCCGCTACTGAGGGCCCTGCTGGAC ATCATCAGGTCCCTGAAGAAGTCTGGGAAGCTGTGGCTGGACGCCTACCTTCACAAA<u>TGA</u>AGCCACAGCCCCCGG GACACCGTGGGGAAGGGGTGCAGGTGGGGTGATGGCCAGAGGAATGATGGGCTTTTGTTCTGAGGGGTGTCCGAG AGGCTGGTGTATGCACTGCTCACGGACCCCATGTTGGATCTTTCTCCCTTTCTCCTCTCTTTTTCTCTCACAT CTCCCCCATAGCACCCTGCCCTCATGGGACCTGCCCTCACCGTCAGCCATCAGCCATGGCCCTCCCAGTG CCTCCTAGCCCCTTCTTCCAAGGAGCAGAGGTGGCCACCGGGGGTGGCTCTGTCCTACCTCCACTCTCTGCCC ${\tt CTAAAGATGGGAGGAGACCAGCGGTCCATGGGTCTGGCCTGTGAGTCTCCCCTTGCAGCCTGGTCACTAGGCATC}$ ACCCCCGCTTTGGTTCTTCAGATGCTCTTGGGGTTCATAGGGGCAGGTCCTAGTCGGGCAGGGCCCCTGACCCTC $\verb|CCGGCCTGGCTTCACTCTCCCTGACGGCTGCCATTGGTCCACCCTTTCATAGAGAGGCCTGCTTTGTTACAAAGC|\\$ TCGGGTCTCCCTCCTGCAGCTCGGTTAAGTACCCGAGGCCTCTCTTAAGATGTCCAGGGCCCCAGGCCCGCGGGC ACAGCCAGCCCAAACCTTGGGCCCTGGAAGAGTCCTCCACCCCATCACTAGAGTGCTCTGACCCTGGGCTTTCAC GGGCCCCATTCCACCGCCTCCCCAACTTGAGCCTGTGACCTTGGGACCAAAGGGGGAGTCCCTCGTCTCTTGTGA CTCAGCAGAGGCAGTGGCCACGTTCAGGGAGGGCCGGCCTGGAGGCTCAGCCCACCCTCCAGCTTTTCCT CAGGGTGTCCTGAGGTCCAAGATTCTGGAGCAATCTGACCCTTCTCCAAAGGCTCTGTTATCAGCTGGGCAGTGC CAGCCAATCCCTGGCCATTTGGCCCCAGGGGACGTGGGCCCTGCAGGCTGCAGGAGGGCACTGGAGCTGGAGGT CTCGTCCCAGCCCTCCCCATCTCGGGGCTGCTGTGTGGACGGCGCTGCCTCAGGCACTCTCCTGTCTGAACCTGC TCTCAGGAGGAGGCTGCCCTGAGGGGCTGGGGAGGGGTACCTCATGAGGACCAGGGTGGAGCTGAGAAGAGGAG ATGGGGGCTTTCGGGGAGGGCCCCTAGTCCCCCCAGCTCTAAGCAGCCAGGAGGGACCTGCATCTAAGCATCTGG GTTGCCATGGCAATGCCATGCCCCCAGCTACTGTATGCCCCCGACCCCCGCAGAGGCAGAATGAACCCATAGGG AGCTGATCGTAATGTTTATCATGTTACTTCCCCACCCCTACATTTTTTGAAATAAAATAAGGAATTTTATTCTC

MGKGGNQGEGAAEREVSVPTFSWEEIQKHNLRTDRWLVIDRKVYNITKWSIQHPGGQRVIGHYAGEDATDAFRAF HPDLEFVGKFLKPLLIGELAPEEPSQDHGKNSKITEDFRALRKTAEDMNLFKTNHVFFLLLLAHIIALESIAWFT VFYFGNGWIPTLITAFVLATSQAQAGWLQHDYGHLSVYRKPKWNHLVHKFVIGHLKGASANWWNHRHFQHHAKPN IFHKDPDVNMLHVFVLGEWQPIEYGKKKLKYLPYNHQHEYFFLIGPPLLIPMYFQYQIIMTMIVHKNWVDLAWAV SYYIRFFITYIPFYGILGALLFLNFIRFLESHWFVWVTQMNHIVMEIDQEAYRDWFSSQLTATCNVEQSFFNDWF SGHLNFQIEHHLFPTMPRHNLHKIAPLVKSLCAKHGIEYQEKPLLRALLDIIRSLKKSGKLWLDAYLHK

3524/6881 FIGURE 3251A

AGGTGGCCCAGCGCTCAGGGTGCGAGGAGCGGTGGCTAGTGATCGACCGTAAGGTGTACAACATCAGCGAGTTCA CCCGCCGGCATCCAGGGGGCTCCCGGGTCATCAGCCACTACGCCGGGCAGGATGCCACGGATCCCTTTGTGGCCT TCCACATCAACAAGGGCCTTGTGAAGAAGTATATGAACTCTCTCCTGATTGGAGAACTGTCTCCAGAGCAGCCCA GCTTTGAGCCCACCAAGAATAAAGAGCTGACAGATGAGTTCCGGGAGCTGCGGGCCACAGTGGAGCGGATGGGGC TCATGAAGGCCAACCATGTCTTCTTCCTGCTGTACCTGCTGCACATCTTGCTGCTGGATGGTGCAGCCTGGCTCA CTGGCTGGCTGCAGCATGACTTTGGGCACCTGTCGGTCTTCAGCACCTCAAAGTGGAACCATCTGCTACATCATT TTGTGATTGGCCACCTGAAGGGGGCCCCGCCAGTTGGTGGAACCACATGCACTTCCAGCACCATGCCAAGCCCA ACTGCTTCCGCAAAGACCCAGACATCAACATGCATCCCTTCTTCTTTGCCTTGGGGAAGATCCTCTCTGTGGAGC TTGGGAAACAGAAGAAAAATATATGCCGTACAACCACCAGCACAAATACTTCTTCCTAATTGGGCCCCCAGCCT TGATTACCTTCTACGTCCGCTTCTTCCTCACTTATGTGCCACTATTGGGGCTGAAAGCCTTCCTGGGCCTTTTCT TCATAGTCAGGTTCCTGGAAAGCAACTGGTTTGTGTGGGTGACACAGATGAACCATATTCCCATGCACATTGATC ATGACCGGAACATGGACTGGGTTTCCACCCAGCTCCAGGCCACATGCAATGTCCACAAGTCTGCCTTCAATGACT GGTTCAGTGGACACCTCAACTTCCAGATTGAGCACCATCTTTTTCCCACGATGCCTCGACACAAATTACCACAAAG TGGCTCCCTGGTGCAGTCCTTGTGTGCCAAGCATGGCATAGAGTACCAGTCCAAGCCCCTGCTGTCAGCCTTCG CCTGCCCAGTCTGGAAGAAGAGGAGGAAGACTCTGGAGCCAAGGCAGAGGGGAGCTTGAGGGACAATGCCACTAT AGTTTAATACTCAGAGGGGGTTGGGTTTGGGGACATAAAGCCTCTGACTCAAACTCCTCCCTTTTATCTTCTAGC CACAGTTCTAAGACCCAAAGTGGGGGGTGGACACAGAAGTCCCTAGGAGGGAAGGAGCTGTTGGGGCAGGGGTGT AAATTATTTCCTTTTTCTAGTTTGGCACATGCAGGTAGTTGGTGAACAGAGAGAACCAGGAGGGTAACAGAAGAG GAGGGACCTACTGAACCCAGAGTCAGGAAGAGATTTAACACTAAAATTCCACTCATGCCGGGCGTGGTGGCACGC GCCTGTAATCCCAGCTACCCAGGAGGCTGAGGCAGGAGAATCGCTTGAACCGGGGAGGTGGAGGTTGCAGTGAGC ATATAAAAGGTGAGCTCAGCTGACTGGTCCATTTCTCAGTGGCTTCTCCATCCTCATTTGCAAACCTCAGAGGGA TAAGGCAGTTGAACCTGATGAGCAAGAATTATAACAGCAAGGAAACATTAATGCTTAGAATTCTGAGATCCAGCA CAACTCAGTCTGTGGGAGCTCAGCTCGCCCCAGGGATAGGTATGACCTATGTCTGCCTTAGGCTGCTGGGAGA TGCCATTCTCCAGTTTCAGAAGCAGGCAGGGCAAAGGTCAAGACTGTGGTATTGGGGTCTTTTGGCTCTGAAGGA TCCTGGAACCACTGATTTTGGTTTATTCCCTCCAGGGTCTAAAGAGAACAAGAGGTGCTAGCTCTTACCAAAACA GATGGTAGAGAGAGTTGCTGGCTATTTAAAAAGCTCTTTCATCTTTTAATTCACCTCTTTTTCACCTCTTTAA CCACTCCTCAGGAACAGAACACTTCTAGGACTGGGGGTCTTTTAGCTCCATAAGCAAGTGAGCAGATGGGACAAG TTAGTCTTTCTCCCTAGAAACAAAGGGGATGCCCAGTGGTTTCCCTTTGCTTCCCAACCTAAAATTTCAAGTTT AATAAAATAGCAATTAGCAGAAGTGACCAAATTGGGAGATAATTATCAGTCATGAGGAAAGACACAGATTTCGGT CATAAAGAATGTAAGGGCTATAAGTAGAAACTTTCTATAACCTAAATGATGTTATAGAATTATTTTTGAGCAGGA GCAGAAAGATTAAATATGATCACTTCATACTTCTAAATCAGAAATAGGAAGATTAAAACCACAGAACAGTTTGTG ATTTCTATTGCTGTAGCTAGGTATCTTACTCTGTCCACTCTTGTTCAAGTATCTAACTCTTCTGGAAACCAAATA GGCTTTAGAAGAGATTATCCTATATTCCTATCAGTATAATACTAAAATGTAACTTTTTAATCATCTGGTTTTTAA AAGATAAACAGTTTAGCCCATCTCTCCAGAGAGCAAACATAGGAATATGACTCAGGAGCCTCCTAGGGCTTATCA TCAGCCCTCACACCCGCTTCCCCCTCCAACCCACAGCCTTTGCTTCCAGGTGGCAGGATTACTACTTTGCCTCTT CAGCAGCATCTACTCTAGGCATATTGATCATTTTAGACACTGGGAGAAGAGAACCTCAAACTAGGAGGAAAAGAC AGAGCCTCCACTTAGTTTTGGGAGGGGATGGCAGACAGTCAAGGAGATGAGCGTCCTAAGGCATGTTGGGATAGG GTCAGATGCACCACCCATGGAGAGGTTTGTCAACACAAAGACATGGAAGGTTAGAGGTTTGTCAACAAAAAGACA TGGAAGGTTAGGTTTGTCAACACAAAGACATGGAAGATTAGAGGTTTGTCAACACAAAGACACAGGAAGAATGGG CTGCAGAAGATTTAGATGTTTTCCATTTGGGCACATTTTACTTAGCTGGAGAACTAGGTTTAAAACAGCCTGGGT GATCACTTGGGCCCAGGAGGTCAAGCCTGCAGCGAGCTGAGATCACACCACTGCACTCCAGCCTGGGGTGATAGA

3525/6881 FIGURE 3251B

MAPDPVAAETAAQGPTPRYFTWDEVAQRSGCEERWLVIDRKVYNISEFTRRHPGGSRVISHYAGQDATDPFVAFH INKGLVKKYMNSLLIGELSPEQPSFEPTKNKELTDEFRELRATVERMGLMKANHVFFLLYLLHILLLDGAAWLTL WVFGTSFLPFLLCAVLLSAVQAQAGWLQHDFGHLSVFSTSKWNHLLHHFVIGHLKGAPASWWNHMHFQHHAKPNC FRKDPDINMHPFFFALGKILSVELGKQKKKYMPYNHQHKYFFLIGPPALLPLYFQWYIFYFVIQRKKWVDLAWMI TFYVRFFLTYVPLLGLKAFLGLFFIVRFLESNWFVWVTQMNHIPMHIDHDRNMDWVSTQLQATCNVHKSAFNDWF SGHLNFQIEHHLFPTMPRHNYHKVAPLVQSLCAKHGIEYQSKPLLSAFADIIHSLKESGQLWLDAYLHQ

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3527/6881 FIGURE 3253

GGAATTCAAGGCCTGGCCAAACTAATTGCTGATGTGGCCCCCAGTGCCATCCGGGAGAATGACATCAAGAGCTAC TTTGGCCGTAAGGTGGCCATTGATGCCTCTATGAGCATTTATCAGTTCCTGATTGCTGTTCGCCAGGGTGGGGAT GTGCTGCAGAATGAGGAGGGTGAGACCACCAGCCACCTGATGGGCATGTTCTACCGCACCATTCGCATGATGGAG AACGGCATCAAGCCCGTGTATGTCTTTGATGGCAAGCCGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGCAGT GAGCGGCCGGGCTGAGGCAGAGAAGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCCGAGCAGGAGGTGGAAAAATTC ACTAAGCGGCTGGTGAAGGTCACTAAGCAGCACAATGATGAGTGCAAACATCTGCTGAGCCTCATGGGCATCCCT TATCTTGATGCACCCAGTGAGGCAGAGGCCAGCTGTGCTGCCCTGGTGAAGGCTGGCAAAGTCTATGCTGCGGCT ACCGAGGACATGGACTGCCTCACCTTCGGCAGCCCTGTGCTAATGCGACACCTGACTGCAGTGAAGCCAAAAAAG CTGCCAATCCAGGAATTCCACCTGAGCCGGATTCTGCAGGAGCTGGGCCTGAACCAGGAACAGTTTGTGGATCTG AAGCACAAGAGCATCGAGGAGATCGTGCGGCGACTTGACCCCAACAAGTACCCTGTGCCAGAAAATTGGCTCCAC AATGAAGAAGAGCTGATCAAGTTCATGTGTGGTGAAAAGCAGTTCTCTGAGGAGCGAATCCGCAGTGGGGTCAAG AGGCTGAGTAAGAGCCGCCAAGGCAGCACCCAGGGCCGCCTGGATGATTTCTTCAAGGTGACCGGCTCACTCTCT TCAGCTAAGCGCAAGGAGCCAGAACCCAAGGGATCCACTAAGAAGAAGGCAAAGACTGGGGCAGCAGGGAAGTTT AAAAGGGGAAAATAATGTGTTTTCCCCATTATACCTCCTTCACCCCAGAATATTTGCCGTCTTGTACCCTTAAGA GCTACAGCTAGAGAAACCTTCACGGGGTGGAGAGAGGATTCTAAGGCTTTTCTAGCGTGACCCTTTTCAGTAGTG CTAGTCCCTTTTTTACTTGATCTTAATGGCAAGAAGGCCACAGAGGTACTTTTCCTTTTTTAGCTCAGGAAAATA CTGGTGGCCAGTGGGAGGTGATGGTGGACCTAGACTGTGCTTTTCTGTCTTGTCAGCCTTGACCCACCTTGAGA GAGAGCCACCAGGAAGGCGCATCTTAGCAGATGGGAGGAACTGCTGAGAGAAGATGGGCAGAAAGCTGGAGCCCC TAATTTGTGTCTAGTTATTCAGAGGAGTAAGATGGTGATGTTCACCTGGCAATCAGCTGAGTTGAGACTTTGGAA TAAGACACTGGTTTTCATGCGCTGTTTTTGTTTTAAAGTTATGAAGAAAAAAGTCAATAAAATTCTAAAAGTAAA ΑΑΑΑΑΑΑΑΑΑΑΑ

MGIQGLAKLIADVAPSAIRENDIKSYFGRKVAIDASMSIYQFLIAVRQGGDVLQNEEGETTSHLMGMFYRTIRMM ENGIKPVYVFDGKPPQLKSGELAKRSERRAEAEKQLQQAQAAGAEQEVEKFTKRLVKVTKQHNDECKHLLSLMGI PYLDAPSEAEASCAALVKAGKVYAAATEDMDCLTFGSPVLMRHLTASEAKKLPIQEFHLSRILQELGLNQEQFVD LCILLGSDYCESIRGIGPKRAVDLIQKHKSIEEIVRRLDPNKYPVPENWLHKEAHQLFLEPEVLDPESVELKWSE PNEEELIKFMCGEKQFSEERIRSGVKRLSKSRQGSTQGRLDDFFKVTGSLSSAKRKEPEPKGSTKKKAKTGAAGK FKRGK

CAGGTGACCAGCGCCATGTCCAGCCAGGTGGTGGGCATTGAGCCTCTCTACATCAAGGCAGAGCCGGCCAGCCCT GACAGTCCAAAGGGTTCCTCGGAGACAGAGACCGAGCCTCCTGTGGCCCTGGCCCCTGGTCCAGCTCCCACTCGC TGCCTCCCAGGCCACAAGGAAGAGGAGGATGGGGAGGGGGGCTGGGCTGGCGAGCAGGGGGGGAAGCTGGTG CTCAGCTCCCTGCCCAAGCGCCTCTGCCTGGTCTGTGGGGACGTGGCCTCCGGCTACCACTATGGTGTGGCATCC TGTGAGGCCTGCAAAGCCTTCTTCAAGAGGACCATCCAGGGGAGCATCGAGTACAGCTGTCCGGCCTCCAACGAG TGTGAGATCACCAAGCGGAGACGCAAGGCCTGCCAGGCCTGCCGCTTCACCAAGTGCCTGCGGGTGGGCATGCTC AAGGAGGAGTGCGCCTGGACCGCGTCCGGGGTGGGCGGCAGAAGTACAAGCGGCGGCGGAGGTGGACCCACTG CCCTTCCCGGGCCCCTTCCCTGCTGGGCCCCTGGCAGTCGCTGGAGGCCCCCGGAAGACAGCAGCCCCAGTGAAT GCACTGGTGTCTCATCTGCTGGTGGTTGAGCCTGAGAAGCTCTATGCCATGCCTGACCCCGCAGGCCCTGATGGG CACCTCCCAGCCGTGGCTACCCTCTGTGACCTCTTTGACCGAGAGATTGTGGTCACCATCAGCTGGGCCAAGAGC CTGGGTGTGGCCCAGCGCTCACTGCCACTGCAGGATGAGCTTGGCCTTCGCTGAGGACTTAGTCCTGGATGAAGAG GGGGCACGGCCAGCTGGCCTGGGGGAACTGGGGGCTGCCCTGCTGCAACTAGTGCGGCGGCTGCAGGCCCTGCGG CTGGAGCGAGAGGAGTATGTTCTACTAAAGGCCTTGGCCCTTGCCAATTCAGACTCTGTGCACATCGAAGATGCC GGGGGTGCTGAGCGGCGGCGGGCGGCCAGGCTGCTCCTCACGCTACCGCTCCTCCGCCAGACAGCGGGCAAAGTG $\tt CTGGCCCATTTCTATGGGGTGAAGCTGGAGGGCAAGGTGCCCATGCACAAGCTGTTCTTGGAGATGCTCGAGGCC$ ATGATGGACTGAGTGCAAGGGGTGGGACTGGTGGGGGTTCTGGCAGGACCTGCCTAGCATGGGGTCAGCCCCAAG GGCTGGGGCGGAGCTGGGGTCTGGCCACTGCCACAGCCTGCCAGGCCAGGCCAATGCCATCAGCCCCTGGGA ACAGGCCCCACGCCTCTCCCCCCCTCTAGGGGGTGTCAGAAGCTGGGAACGTGTGTCCAGGCTCTGGGCACA GTGCTGCCCCTTGCAAGCCATAACGTGCCCCCAGAGTGTAGGGGGCCTTGCGGAAGCCATAGGGGGCTGCACGGG ATGCGTGGGAGGCAGAAACCTATCTCAGGGAGGGAAGGGGATGGAGGCCAGAGTCTCCCAGTGGGTGATGCTTTT GCTGCTGCTTAATCCTACCCCCTCTTCAAAGCAGAGTGGGACTTGGAGAGCCAAAGGCCCATGCCCCCTTCGCTCC TCCTCTCATCATTTGCATTGGGCATTAGTGTCCCCCCTTGAAGCAATAACTCCAAGCAGACTCCAGCCCCTGGAC $\tt CCCTGGGGTGGCCAGGGCTTCCCCATCAGCTCCCAACGAGCCTCCTCAGGGGGTAGGAGAGCACTGCCTCTATGC$ CCTGCAGAGCAATAACACTATATTTATTTTTGGGTTTGGCCAGGGAGGCCAGGGACATGGGGCCAAGCCAGGGCC CTTTAATGAGAAAAAAATATATAATACCGAGCTC

 $\tt CACGGGCGGGGCCTGGGTCCACCGGGGTTCTGAGGGGAGACTGAGGTCCTGAGCCGACAGCCTCAGCTCC$ AAGCCAGGGGTACCTGCCTCTGCCTTCCAGGGCCACCGTTGGCCCCAGCTGTGCCTTGACTACGTAACATCTTGT CCTCACAGCCCAGAGCATGTTCCAGATCCCAGAGTTTGAGCCGAGTGAGCAGGAAGACTCCAGCTCTGCAGAGAG GGGCCTGGGCCCCAGCCCCGCAGGGGACGGGCCCTCAGGCTCCGGCAAGCATCATCGCCAGGCCCCAGGCCTCCT GTGGGACGCCAGTCACCAGCAGGAGCAGCCACCATCATGGAGGCGCTGGGGCTGTGGAGATCCG GAGTCGCCACAGCTCCTACCCCGCGGGGACGGAGGACGACGAAGGGATGGGGGAGGAGCCCAGCCCCTTTCGGGG CCGCTCGCGCTCGGCGCCCCCAACCTCTGGGCAGCACAGCGCTATGGCCGCGAGCTCCGGAGGATGAGTGACGA GTTTGTGGACTCCTTTAAGAAGGGACTTCCTCGCCCGAAGAGCGCGGGCACAGCAACGCAGATGCGGCAAAGCTC $\tt CAGCTGGACGCGAGTCTTCCAGTCCTGGTGGGATCGGAACTTGGGCAGGGGAAGCTCCGCCCCTCCCAG\underline{TGA}CC$ TTCGCTCCACATCCCGAAACTCCACCCGTTCCCACTGCCCTGGGCAGCCATCTTGAATATGGGCGGAAGTACTTC GTGTGAAGCCACGGAAGCTTGGTCCCATCGGAAGTTTTGGGTTTTCCGCCCACAGCCGCCGGAAGTGGCTCCGT GGCCCCGCCCTCAGGCTCCGGGCTTTCCCCCAGGCGCCTGCGCTAAGTCGCGAGCCAGGTTTAACCGTTGCGTCA CCGGGACCCGAGCCCCGCGATGCCCTGGGGGCCGTGCTCACTACCAAATGTTAATAAAGCCCGCGTCTGTGCCG CC

 $\label{thm:mfq:pefepseq} $$ MFQIPEFEPSEQEDSSSAERGLGPSPAGDGPSGSGKHHRQAPGLLWDASHQQEQPTSSSHHGGAGAVEIRSRHSS\\ YPAGTEDDEGMGEEPSPFRGRSRSAPPNLWAAQRYGRELRRMSDEFVDSFKKGLPRPKSAGTATQMRQSSSWTRV\\ FQSWWDRNLGRGSSAPSQ$

WO 2004/030615 PCT/US2003/028547

3532/6881 FIGURE 3258

 $\label{thm:particle} \begin{tabular}{l} MFQIPEFEPSEQEDSSSAERGLGPSPAGDGPSGSGKHHRQAPGLLWDASHQQEQPTSSSHHGGAGAVEIRSRHSS\\ YPAGTEDDEGMGEEPSPFRGRSRSAPPNLWAAQRYGRELRRMSDEFVDSFKKGLPRPKSAGTATQMRQSSSWTRV\\ FQSWWDRNLGRGSSAPSQ\\ \end{tabular}$

GGCGAGGAAGGGGGGGGAGCCGGGGTCCCGGTAGCTTCTAGTAGGTTCCAGAAGGCGGCGCGCGTGCGGTTGGGAAC GCGGAGCGGACCGGATTCGATTCAACGGGGTTCCGGACCGCGCTGCGCTATGGAGCAGGTCAATGAGCTGAAGGAG AAAGGCAACAAGGCCCTGAGCGTGGGTAACATCGATGATGCCTTACAGTGCTACTCCGAAGCTATTAAGCTGGAT CCCCACAACCACGTGCTGTACAGCAACCGTTCTGCTGCCTATGCCAAGAAAGGAGACTACCAGAAGGCTTATGAG GATGGCTGCAAGACTGTCGACCTAAAGCCTGACTGGGGCAAGGGCTATTCACGAAAAGCAGCAGCTCTAGAGTTC TTAAACCGCTTTGAAGAAGCCAAGCGAACCTATGAGGAGGGCTTAAAACACGAGGCAAATAACCCTCAACTGAAA GAGGGTTTACAGAATATGGAGGCCAGGTTGGCAGAGAGAAAATTCATGAACCCTTTCAACATGCCTAATCTGTAT CGAAACAAGCCTTCTGACCTGGGCACGAAACTACAAGATCCCCGGATCATGACCACTCTCAGCGTCCTCCTTGGG GCCTACAAGAAGAAGACTTTGACACAGCCTTGAAGCATTACGACAAAGCCAAGGAGCTGGACCCCACTAACATG ACTTACATTACCAATCAAGCAGCGGTATACTTTGAAAAGGGCGACTACAATAAGTGCCGGGAGCTTTGTGAGAAG GCCATTGAAGTGGGGAGAAAACCGAGAAGACTATCGACAGATTGCCAAAGCATATGCTCGAATTGGCAACTCC TACTTCAAAGAAAAAGTACAAGGATGCCATCCATTTCTATAACAAGTCTCTGGCAGAGCACCGAACCCCAGAT GTGCTCAAGAAATGCCAGCAGG

3536/6881 ----- FIGURE 3262

MGADGFVPLGTLLQLPQFRGFSAEDVQRVVDTNRKQRFALQLGDPSTGLLIRANQGHSLQVPKLELMPLETPQAL PPMLVHGTFWKHWPSILLKGLSCQGRTHIHLAPGLPGDPGIISGMRSHCEIAVFIDGPLALADGIPFFRSANGVI LTPGNTDGFLLPKYFKEALQLRPTRKPLSLAGDEETECQSSPKHSSRERRRIQQ

AGACAGACCCCGTGCGGCTGACACAGCTGTATGAGCAGGCCCGGTGGGACCTGCTGCTGGAGGAGATTGACTGCA CCGAGGAGGAGATGATGGTGTTTGCCGCCCTGCAGTACCACATCAACAAGCTGTCCCAGAGCGGGGAGGTGGGGG AGCCGGCTGGCACAGACCCAGGGCTGGACGACCTGGATGTGGCCCTGAGCAACCTGGAGGTGAAGCTGGAGGGG CGGCGCCCACAGATGTGCTGGACAGCCTCACCACCATCCCAGAGCTCAAGGACCATCTCCGAATCTTTCGGCCCC GGAAGCTGACCCTGAAGGGCTACCGCCAACACTGGGTGGTGTTCAAGGAGACCACACTGTCCTACTACAAGAGCC AGGACGAGGCCCCTGGGGACCCCATTCAGCAGCTCAACCTCAAGGGCTGTGAGGTGGTTCCCGATGTTAACGTCT ATGAGCAGCAGTATGCCCGCTGGATGGCTGGCTGCCGCCTCGCCTCCAAAGGCCGCACCATGGCCGACAGCAGCT $\tt CCCACGGCCCTGATGCCTCTGCCGAGGGCCTCAACCCCTACGGCCTCGTTGCCCCCCGTTTCCAGCGAAAGTTCA$ AGGCCAAGCAGCTCACCCCACGGATCCTGGAAGCCCACCAGAATGTGGCCCAGTTGTCGCTGGCAGAGGCCCAGC TGCGCTTCATCCAGGCCTGGCAGTCCCTGCCCGACTTCGGCATCTCCTATGTCATGGTCAGGTTCAAGGGCAGCA GGAAAGACGAGATCCTGGGCATCGCCAACAACCGACTGATCCGCATCGACTTGGCCGTGGGCGACGTGGTCAAGA CCTGGCGTTTCAGCAACATGCGCCAGTGGAATGTCAACTGGGACATCCGGCAGGTGGCCATCGAGTTTGATGAAC ACATCAATGTGGCCTTCAGCTGCGTGTCTGCCAGCTGCCGAATTGTACACGAGTATATCGGGGGCTACATTTTCC TGTCGACGCGGGGGCCCGTGGGGAGGAGCTGGATGAAGACCTCTTCCTGCAGCTCACCGGGGGCCATGAGG CCTTCTGAGGGCTGTCTGATTGCCCCTGCCCTGCTCACCACCTGTCACAGCCCACTCCCAAGCCCACACCCACAGG GGCTCACTGCCCCACACCCGCTCCAGGCAGGCACCCAGCTGGGCATTTCACCTGCTGTCACTGACTTTGTGCAGG CCAAGGACCTGGCAGGCCAGACGCTGTACCATCACCCAGGCCAAGGATGGGGGTGGGGGTCCCTGAGCTCATGT GGTGCCCCCTTTCCTTGTCTGAGTGGCTGAGGCTGATACCCCTGACCTATCTGCAGTCCCCCAGCACACAAGGAA TTATAAATTAATATTTTATTGTTGG

 ${\tt MSVLTPLLLRGLTGSARRLPVPRAKIHSLPPEGKLGIMELAVGLTSCFVTFLLPAGWILSHLETYRRPE}$

AATTGGCAACCCGGAAGCGGTCGGTAGTGCGGCGCTGTTTAAAGATGCCGGCGGAGGAACCTCAGCAGCAGAAGC AGGAGCCGCTGGGCAGCGACTCCGAAGGTGTTAACTGTCTGGCCTATGATGAAGCCATCATGGCTCAGCAGGACC GAATTCAGCAAGAGATTGCTGTGCAGAACCCTCTGGTGTCAGAGCGGCTGGAGCTCTCGGTCCTATACAAGGAGT ATGCTGAAGATGACAACATCTATCAACAGAAGATCAAGGACCTCCACAAAAAGTACTCGTACATCCGCAAGACCA GGCCTGACGGCAACTGTTTCTATCGGGCTTTCGGATTCTCCCACTTGGAGGCACTGCTGGATGACAGCAAGGAGT TGCAGCGGTTCAAGGCTGTCTCCCAAGAGCAAGAAGACCTGGTGTCCCCAGGGCTTCACTGAATTCACAATTG AGGATTTCCACAACACGTTCATGGACCTGATTGAGCAGGTGGAGAGCCAGACCTCTGTCGCCGACCTGCTGGCCT CCTTCAATGACCAGAGCACCTCCGACTACCTTGTGGTCTACCTGCGGCTGCTCACCTCGGGCTACCTGCAGCGCG TGGACCGCGGCGAGGCCACCACCAATCCGCACATCTTCCCTGAGGGCTCCGAGCCCAAGGTCTACCTTCTCT ACCGGCCTGGACACTACGATATCCTCTACAAATACGCTGGCTCCAGCCCGCTGCTGCCCCCCTCTG CCAGGCGCTAGACATGTACAGAGGTTTTTCTGTGGTTGTAAATGGTCCTATTTCACCCCCTTCTTCCTGTCACAT GACCCCCCCATGTTTTATTAAAGGGGGTGCTGGTGGTGAGCCGTGTGTGCGTGTCCCTGCTCTGCTGCCCGCC TGGCTGCTCTGCTGCCCCCCCCCCCGGTGGGTCCCCCTGCTTTTCACCTATCTACTCCTGAGCTTCCCC TTCATCTGCTCCCTCATAGGCCCCACCTCCACGTCCCGGCTGGGCCCCAGACCCCAGCTTCCTGCCCTCCACCGG GAGTCTGCATGGTTGGGAGTCCTGGGTGGAGGGCCCTTTGTGAGGCTGGACCCGGCTCAGGGCAGGTGGAGGAGC TGGGCCTCCCACAGGGTGCCCGGCCATCCTGGTGGGGGAGGCCATCCTACAACGTGTGGGGTCTACAG GCACATTCGGGGTCTCAGCCCCCAGGCTGTGAGCTCCTTGGGGGCCAGGCCCTCAATAAATGTGAACTGCTGCTGC CGCCAAAAAAAAAAAAAAAA

MAAEEPQQQKQEPLGSDSEGVNCLAYDEAIMAQQDRIQQEIAVQNPLVSERLELSVLYKEYAEDDNIYQQKIKDL HKKYSYIRKTRPDGNCFYRAFGFSHLEALLDDSKELQRFKAVSAKSKEDLVSQGFTEFTIEDFHNTFMDLIEQVE RQTSVADLLASFNDQSTSDYLVVYLRLLTSGYLQRESKFFEHFIEGGRTVKEFCQQEVEPMCKESDHIHIIALAQ ALSVSIQVEYMDRGEGGTTNPHIFPEGSEPKVYLLYRPGHYDILYK

AAATGAAGTGCGCGCTGCGACACCTCCCAGCCCACCGAACTCCGCCGCCATTTCCTCGCTTGGCCTAACGGTTCG GCCAATCCCAGCGCGCATCAAGAAGGACTGAGGCTCCGCCAATCGGAGGCCGCCGATTTCGACCCTTCGCCTCGG CCCGGCCCAATCCAGGCCCCGGCCCGCCCCCGGCCCCCGCGGTGCCCTCTCTCCCCCTCTTTGTGC GTCTCGCGCCGCCGCCGCCGCGTGAGAGGACGGCTCCGCGCGCTCCGGCAGCGCATTCGGGTCCCCTCCC CCCGGGAGGCTTGCGAAGGAGAAGCCGCCGCAGAGGAAAAGCAGGTGCCGGTGCCTGTCCCCGGGGGCCCCATGG CGACCGGAGCGAACGCCACGCCGTTGGACTTCCCAAGTAAGAAGCGGAAGAGAGCCGCTGGAACCAAGACACAA ATATAGTGCAACTGCAGATAGAAGACCTGACTCGTAAACTGCGCACAGGAGACCTGGGCATCCCCCTAACCCTG AGGACAGGTCCCCTTCCCCTGAGCCCATCTACAATAGCGAGGGGAAGCGGCTTAACACCCCGAGAGTTCCGCACCC GCAAAAAGCTGGAAGAGGAGCGGCACAACCTCATCACAGAGATGGTTGCACTCAATCCGGATTTCAAGCCACCTG CAGATTACAAACCTCCAGCAACACGTGTGAGTGATAAAGTCATGATTCCACAAGATGAGTACCCAGAAAATCAACT TTGTGGGGCTGCTCATCGGGCCCAGAGGGAACACCCTGAAGAACATAGAGAAGGAGTGCAATGCCAAGATTATGA TCCGGGGGAAAGGGTCTGTGAAAGAAGGGAAGGTTGGGCGCAAAGATGGCCAGATGTTGCCAGGAGAAGATGAGC CACTICATGCCCTGGTTACTGCCAATACAATGGAGAACGTCAAAAAGGCAGTGGAACAGATAAGAAACATCCTGA AGCAGGGTATCGAGACTCCAGAGGACCAGAATGATCTACGGAAGATGCAGCTTCGGGAGTTGGCTCGCTTAAATG GGACCCTTCGGGAAGACGATAACAGGATCTTAAGACCCTGGCAGAGCTCAGAGACCCGCAGCATTACCAACACCA CAGTGTGTACCAAGTGTGGAGGGGCTGGCCACATTGCTTCAGACTGTAAATTCCAAAGGCCTGGTGATCCTCAGT CAGCTCAGGATAAAGCACGGATGGATAAAGAATATTTGTCCCTCATGGCTGAACTGGGTGAAGCACCTGTCCCAG CATCTGTGGGCTCCACCTCTGGGCCTGCCACCACCCCTGGCCAGCGCACCTCGTCCTGCTGCTCCCGCCAACA ACCCACCTCCACCGTCTCTCATGTCTACCACCCAGAGCCGCCCACCCTGGATGAATTCTGGCCCTTCAGAGAGTC GGCCCTACCACGGCATGCATGGAGGTGGTCCTGGTGGGCCCGGAGGTGGCCCCCACAGCTTCCCACACCCATTAC CACCACCACCACGATGAACCAGGGCCCCCACCCTCCTGGGCACCATGGCCCTCCTCCAATGGATCAGTACCTGG GAAGTACGCCTGTGGGCTCTGGGGTCTATCGCCTGCATCAAGGAAAAGGTATGATGCCGCCACCACCTATGGGCA TGATGCCGCCGCCGCCGCCTCCCAGTGGGCAGCCCCCACCCCTCTCTGGTCCTCTTCCCCCATGGCAAC AACAGCAGCAGCCTCCGCCACCCCTCCGCCCAGCAGCAGTATGGCTTCCAGTACCCCCTTGCCATGGCAGC AAAATACGACGACTACCACCACGAGCGCTGGCACAGGGTCCATCCCGCCATGGCAACAGCAGCAGCGGCTGCCG CAGCTTCTCCAGGAGCCCCTCAGATGCAAGGCAACCCCACTATGGTGCCCCTGCCCCCGGGGTCCAGCCGCCTC TGCCGCCTGGGGCCCCTCCCCCTCCGCCCCGTAGCATCGAGTGTCTTCTTTGTCTTCTTCTCTCCTCACCCAAC GACTTTCCGCGCCCATTGGTGACCCTTCCAGGCAGACAGCCTCAGCAACGCCCCTGGTGGACAGGATGGTTCGGC AAAGCAGCCTGAGTTATTTTTGTGGACGGAATCGGAACACGCTGGCTCCATATCGTGAAATTTTTATTAATTTTT TTCTTTTTCCTTTGTTACTTCTTTATCTTTTCCTTTCAGACTCCGTCCAAGGAGATGCTCTCCCCGGTCTTC TGCTGCAATTTAGATTCCTTTCCCTTCTCCCAGTTCTCCTTCCCTTACCAAGGAGAGGGGGAGCAAATGGTTTTG GGCAAGGGCTTTGGCCATTCATGTCAAGCTGGTTGTGGGTTTTTCAAGGTGCCATAGCCACCCCCAAATATGTTT GTTTAAAGCGTGGGGTTTTTTAATCTCTGCCACCCTTGTCAAGGGAGTCTTGTAAAGTTGCCGAGGGTAGGTTCA TCGCCTGCCAGCCTGGAGTTCTTCCTGTGCTCCTTGATCACCTGAGCTGCCTCAGATTCCATTTGGTCCTCTCCT TCCTGGAAGGCTTCCTTTTATGTTTTGTTTTAATCCCAAATGTCTGAATGTTTTGCAGTGTGTAGGGGTTTGAGC CCCTTGTTCATTCTCCTTCCTTTTTCCTCCCGCTTCCCTCTCCATGAAGTGATTCTGTTGACAATAATGTATACT GCGCGTTCTCTCACTGGTTTATCTGCAGAAATTTCTCTGGGCTTTTTTCGGTGTTTAGATTCAACACTGCGCTAA AGCGGGGATGTTCCATTGAATAAAAGAGCAGTGTGGTTTTCTGGG

GCGCCGGGCCATGGCGCTGCTGCGGGATGTGTCGCTGCAGGACCCGCGGGACCGCTTCGAGCTGCTGCAGCGCGT GGGGGCCGGGACCTATGGCGACGTCTACAAGGCCCGCGACACGGTCACGTCCGAACTGGCCGCCGTGAAGATAGT CAAGCTAGACCCAGGGGACGACATCAGCTCCCTCCAGCAGGAAATCACCATCCTGCGTGAGTGCCGCCACCCCAA TGTGGTGGCCTACATTGGCAGCTACCTCAGGAATGACCGCTTGTGGATCTGCATGGAGTTCTGCGGAGGGGGCTC CCTGCAGGAGATTTACCATGCCACTGGGCCCCTGGAGGAGCGCAGATTGCCTACGTCTGCCGAGAGGCACTGAA GGGGCTCCACCACCTGCATTCTCAGGGGAAGATCCACAGAGACATCAAGGGAGCCAACCTTCTCCTCACTCTCCA GGGAGATGTCAAACTGGCTGACTTTGGGGTGTCAGGCGAGCTGACAGCGTCTGTGGCCAAGAGGAGGTCTTTCAT TGGGACTCCCTACTGGATGGCTCCCGAGGTGGCTGCTGTGGAGCGCAAAGGTGGCTACAATGAGCTATGTGACGT CCTGATGCTCATGTCGAAGAGCAGCTTCCAGCCGCCCAAACTGAGAGATAAGACTCGCTGGACCCAGAATTTCCA $\tt CCACTTTCTCAAACTGGCCCTGACCAAGAATCCTAAGAAGAGGCCGACAGCAGAGAAGCTCCTGCAGCACCCGTT$ TACCATGGGAACCATCAAGCGGGCCCGTTCCTAGGGCCACTCCCCACTGACCCTCCAGCAGGAGGAGCCTCTGTC CAGTCCCCAGGAACCCTGCCCCCACCTCCTTCAGGCCCCAACAGCTCCCCACTGCTGCCCACGGCCTGGGCCAC GGACCAGTTCCTGGTGGTAGGGGCCGAGGAAGGCATCTACACACTCAACCTGCATGAACTGCATGAGGATACGCT GGAGAAGCTGATTTCACATCGCTGCTCCTGGCTCTACTGCGTGAACAACGTGCTGCTGTCACTCTCAGGGAAATC CACGCACATCTGGGCCCATGACCTCCCAGGCCTGTTTGAGCAGCGGAGGCTACAGCAACAGGTTCCCCTCTCCAT CCCCACCAACCGCCTCACCCAGCGCATCATCCCCAGGCGCTTTGCTCTGTCCACCAAGATTCCTGACACCAAAGG GCTCCTGCTGCAGTGGTATGAGCCGCTGCAGAAGTTTCTGCTGCTGAAGAACTTCTCCAGCCCTCTGCCCAGCCC GGGCCCGGCTGCCGCTCCTGTTCCATGTCCTGCCCCTGGAGGCTGGCCTGACGCCCGACATCCTCATCCCACC TGAGGGGATCCCAGGCTCGGCCCAGCAGGTGATCCAGGTGGACAGGGACACAATCCTAGTCAGCTTTGAACGCTG TGTGAGGATTGTCAACATGCAGGGCGAGCCCACGGCCACACTGGCACCTGAGCTGACCTTTGATTTCCCCATCGA GACTGTGGTGTGCCTGCAGGACAGTGTGCTGGCCTTCTGGAGCCATGGGATGCAAGGCCGAAGCCTGGATACCAA TGAGGTGACCCAGGAGATCACAGATGAAACAAGGATCTTCCGAGTGCTTGGGGCCCACAGAGACATCATCCTGGA GAGCATTCCCACTGACAACCCAGAGGCGCACAGCAACCTCTACATCCTCACGGGCCACCAGAGCACCTACTAAGA GCAGCGGGCCTGTCCAGGGGCTCCCCGCCCCACCCCACGCCTTAGCTGCAGGCCCTTTTGGGCAAAGGGGCCCAT CCTAGACCAGAGGAGCCCAGGCCCTGCCGGGGCTGAAGGTCAGAAGTAATCCTGAGAAATGTTTCAGGC $\tt CTGGGGAGGGGAGCCCCCGACGCCTCTGCAATAACTGGACCAGGGGGAGCTGCTGTCACTCCCCCATCCCC$ CTTTCTACTCTTTCTGCCAAGAGCCTGCCCTGCATTTGTCCTGGGAAACACGGTATTTAAGAGAGAACTATATT GGTATTAAAGCTGGTTTGTTTT

GGCACCAGTCGGAGGGGCGGGGCTGGGAGGGGCTCCTCCCTACCGCCCCAATTCCGCCCTGCCCCCCCGCGGGC GGCGCTAGCCGCCACTGAGGGACCGACCCTATAAAGGCCGCTCCGCGAGGGGTGCGCAGCATTCGGCAGAGGGCG $\tt CTGGGTCAGCAAGGATGCCCGCCAAGAAGGAGCCGGAGCTCTTCCAGACGGTGGCTGAGGGGCTGCGGCAGCT$ GTACGCGCAGAAGCTGCTACCCCTGGAGGAGCACTACCGCTTCCACGAGTTCCACTCGCCCGCGCTGGAGGACGC TGACTTCGACAACAAGCCTATGGTGCTCCTCGTGGGGCAGTACAGCACGGGCAAGACCACCTTCATCCGACACCT GATCGAGCAGGACTTCCCGGGGATGCGCATCGGGCCCGAGCCCACCGACTCCTTCATCGCCGTCATGCACGG $\tt CCCCACTGAGGGCGTGGTGCCGGGCAACGCGCTCGTGGTGGACCCGCGGCGCCCCTTCCGCAAGCTCAACGCGTT$ TGGCAACGCTTTCCTCAACAGGTTCATGTGTGCCCAGCTGCCCAACCCCGTCCTGGACAGCATCAGCATCATCGA ${\tt CACCCCGGGATCCTGTCTGGAGAGAGCAGCGGATCAGCAGAGGCTATGACTTTGCAGCCGTCCTGGAGTGGTT}$ CGCGGAGCGTGTGGACCGCATCATCCTGCTCTTCGACGCCCCACAAGCTGGACATCTCCGATGAGTTCTCGGAAGT GATCAAGGCTCTGAAGAACCATGAGGACAAGATCCGCGTGGTGCTGAACAAGGCAGACCAGATCGAGACGCAGCA GCTGATGCGGGTGTACGGGGCCCTCATGTGGTCCCTGGGCAAGATCATCAACACCCCCGAGGTGGTCAGGGTCTA GAAAGAGCTGGTGAACAACCTCGGAGAGATCTACCAGAAGATTGAGCGCGAGCACCAGATCTCCCCTGGGGACTT ${\tt CCCGAGCCTCCGCAAGATGCAGGAACTCCTGCAGACCCAGGACTTCAGCAAGTTCCAGGCGCTGAAGCCCAAGCT}$ GCTGGACACGGTGGATGACATGCTGGCCAACGACATCGCGCGGCTGATGGTGATGGTGCGGCAGGAGGAGTCCCT GATGCCTTCCCAGGTGGTCAAGGGCGGCGCCTTTGACGGCACCATGAACGGĞCCGTTCGGGCCACGGCTACGGCGA GGGGGCCGGCGAGGCCATCGACGACGTGGAGTGGGTGGTGGGCAAGGACAAGCCCCACCTACGACGAGATCTTCTA CACGCTGTCCCCTGTCAACGCCAAGATCACGGGCGCCCAACGCCAAGAAGGAGATGGTGAAGTCCAAGCTCCCCAA CACCGTGCTAGGGAAGATCTGGAAGCTGGCCGACGTGGACAAGGACGGGCTGCTGGACGACGAGGAGTTCGCGCT TGTGATGGCACCAAGGCAGGTGGAGCACCAGGTACCACACAGCTGGGCTTCCCACCAGGCTTTCCCGCGGGGGTC TCAGGGAGCTTCTCCCCAGCGCTGCTCGGAGTCTGCAGGAACTGGCCTTGTTCTCCTTAGCCCGTCACTCCATAC AGTATTAGGTGAGGATGGATGCGGGCGCTGTCCTTGCCGGGAAGTCACTGTTGAAGTTGCAGTGGCTTGTTCACA CCTGTGGGAAGAGAGTGAAGACTTTCTCCTTGCATTAAAAAGTCTGAACTGTG

MFSWVSKDARRKKEPELFQTVAEGLRQLYAQKLLPLEEHYRFHEFHSPALEDADFDNKPMVLLVGQYSTGKTTFI
RHLIEQDFPGMRIGPEPTTDSFIAVMHGPTEGVVPGNALVVDPRRPFRKLNAFGNAFLNRFMCAQLPNPVLDSIS
IIDTPGILSGEKQRISRGYDFAAVLEWFAERVDRIILLFDAHKLDISDEFSEVIKALKNHEDKIRVVLNKADQIE
TQQLMRVYGALMWSLGKIINTPEVVRVYIGSFWSHPLLIPDNRKLFEAEEQDLFKDIQSLPRNAALRKLNDLIKR
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PKLLDTVDDMLANDIARLMVMVRQEESLMPSQVVKGGAFDGTMNGPFGHGYGEGAGEGIDDVEWVVGKDKPTYDE
IFYTLSPVNGKITGANAKKEMVKSKLPNTVLGKIWKLADVDKDGLLDDEEFALANHLIKVKLEGHELPADLPPHL
VPPSSAWGH

3547/6881 FIGURE 3273A

ACGGGGATCGCCGGCGGCGGCAAGCGGAGGCGGCCCAGGCCCGGCGTCTCCGAGATGTCACGATGGCTGTGGC CATGGTCAAACTGTGTGAAAGAGCGGGTCTGCCGCTACTTGCTGCACCACTACTTAGGTCACTTCTTCCAAGAGC ACCTCAGCCTGGACCAGCTCAGCCTCGATCTGTACAAGGGCAGCGTTGCCCTGCGAGACATCCACCTGGAAATCT GGTCTGTGAACGAGGTGCTGGAGTCAATGGAGTCACCGCTGGAGCTGGTGGAAGGCTTCGTGGGCTCCATCGAGG TGGCCGTGCCCTGGGCTGCTCTGCTCACCGACCACTGCACAGTGCGCGTGTCCGGCCTCCAGCTCACCTTGCAGC CCCAGGAGTGTCTGCGGGATGGGCTACCGGAGCCCTCTGAGCCACCACAGCCCCTGGAGGGGCTGGAGATGTTTG CCCAGACCATTGAGACTGTGCTTCGGAGGATCAAAGTGACCTTCCTGGACACTGTCGTGAGGGTGGAGCACTCTC CGGGTGATGGGGAACGTGGTGTGGCCGTCGAGGTCCGTGTGCAGAGACTGGAGTACTGTGATGAGGCAGTGCGGG TCCGCCTGCACTACGAGGAGCTCCCGGCACAGGAAGAGCCTCCAGAGCCCCCTTGCAGATCGGCAGCTGCTCAG GGTACATGGAGCTGATGGTGAAGTTGAAGCAAAATGAGGCCTTCCCTGGCCCCAAGTTGGAGGTGGCGGGACAGC TGGGCTCCCTGCACCTGCTCCTGACCCCGAGGCAGCTCCAGCAACTTCAGGAACTGCTCAGCGCCGTGAGCCTTA AGGACCTGAACCAGCAGCTGCAGGCAGGGGGCAGTGGCTGAGCCCCTCAGCCCAGACCCCCTTACCAACCCCCTTC TCTCCCTCTCCGATGTAGACCTGGCCTCCTCTGTGCGCAGCGACATGGCCTCCCGCCGGCTCTCTGCCCAGGCCC ACCCAGCTGGCAAGATGGCCCCCAACCCCTCCTGGACACCATGCGCCCTGACTCGCTGAAGATGACCTTGG GGGGTGTGACCCTGACCTTCAGACGTCTGCCCCATCTTCCGGACCACCTGACCTCGCCACGCACTTTTTCA $\tt CCGAGTTTGATGCCACCAAGGATGGGCCCTTCGGTTCCCGAGACTTCCATCACCTTCGACCACGCTTCCAGAGGG$ CCTGTCCCTGTAGCCATGTTCGGCTAACGGGCACAGCCGTGCAGCTGTCCTGGGAGCTGCGGACGGCCAGTCGGG $\tt GCCGGCGGACAACCAGCATGGAAGTGCACTTCGGGCAGCTGGAGGTGCTGGAGTGTCTGTGGCCCCGGGGCACCT$ CTGAGCCTGAGTACACGGAGATCCTGACCTTTCCTGGTACGCTGGGCTCCCAGGCCTCAGCTCGGCCCTGCGCCCC CAGAACTGGCCCTGGACCTGGCCAACTTCCAGGCGGACGTGGAGCTGGGGGCCCTGGACCGGCTGGCCGCCCTAC CGGTATTTCGGCTCTCTGCACCCCGGGCCACGCTGCGGCTTCCCCATTGCCGACCTGCGGCCTGAGCCGG TTAGCAGTGGGCCTGGTCCCCCAGTCCCCACCTGGAACTCACCTGCTCCGACCTACATGGTATCTATGAAG ATGGAGGGAAGCCACCTGTCCCTTGCCTGCGTGTCTCCAAAGCCCTGGACCCCAAGAGCACTGGGCGCAAGTACT TCCTGCCCCAGGTAGTGGTGACTGTGAACCCCCAGTCCAGCAGCACACAGTGGGAGGTGGCCCCGGAGAAGGGAG AGGAACTGGAGCTGTCAGTGGAGAGTCCCTGTGAGCTGCGGGAACCTGAGCCCTTCTCCTCTAAAGAGGA CCATGTATGAGACAGAGGAGATGGTGATCCCTGGAGACCCTGAGGAGATGAGGACGTTCCAGAGCCGGACCCTGG CACTGTCCCGCTGCAGCCTGGAAGTGATCCTGCCCAGTGTCCACATCTTTCTGCCCAGCAAGGAGGTCTACGAGA GCATCTACAACAGGATCAACAACGACCTGCTCATGTGGGAGCCTGCAGATCTGCTTCCCACCCCGACCCCGCCG $\tt CCCAGCCCTCGGGCTTCCCCGGCCCCTCAGGCTTCTGGCACGACAGCTTTAAGATGTGCAAGTCAGCCTTCAAGCCTTCAAGCCTTCAAGCCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAAGCCTTCAA$ TGGCCAACTGCTTTGATCTCACCCCAGACTCGGACTCGGATGACGAGGATGCCCACTTCTTCTCAGTGGGGGCAT CAGGTGGCCCACAGGCCGCTGCCCCTGAGGCCCCAAGTCTTCACTTGCAGAGCACCTTCTCTACACTGGTGACAG TGCTGAAGGGGCGGATCACAGCCCTCTGTGAGACCAAGGATGAGGGTGGGAAGCGGCTGGAGGCTGTGCACGGGG TCTGTCTGGAAGCTGAAAAGGCAACACTCTACCACCGAGCGGCCGTGGATGACTACCCGCTGCCCAGTCACCTGG ACCTTCCCAGTTTCGCTCCCCGGCTCAGCTGGCCCCAACCATCTACCCATCGGAGGAAGGGGTGACCGAGCGGG GAGCCTCGGGCCGCAAGGGCCAGGGCCGGGGACCCCACATGTTGTCCACTGCTGTGCGCATCCACCTGGACCCCC ACAAGAATGTGAAGGAGTTCCTGGTGACACTGCGGTTGCACAAAGCCACCTTGCGCCACTACATGGCCCTGCCCG AGCAGAGCTGGCATTCCCAGTTGTTGGAGTTCCTAGACGTGCTGGATGACCCTGTGCTGGGCTACCTGCCCCGA $\tt CGGTCATCACCATCCTGCACACACCTGTTCTCCTGCTCTGTGGACTATAGGCCACTCTACCTCCCAGTGCGTG$ TCCTCATCACCGCGGAGACCTTCACTCTCTCCAGCAACATCATCATGGACACCTCCACCTTCCTGCTCAGGTTCA TCCTCGATGACTCCGCCTTGTACCTGTCCGACAAGTGTGAGGTGGAGACCCTGGACCTGCGGCGAGATTATGTCT

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3548/6881 FIGURE 3273B

GTGTTTTGGATGTTGACCTCTTGGAACTTGTGATTAAAACCTGGAAAGGGAGCACCGAGGGCAAACTGAGCCAGC CACTATTCGAGCTGCGCTCCCAACATGTGGTACACGTGCACAGCTGTGCCGACTCCTGTGCCCTGCTGGTCA ACCTGCTCCAGTACGTAATGAGCACAGGCGATCTGCACCCCCACCCCGGCCCCCAGCCCCACGGAGATCGCCG GCCAGAAGCTCTCGGAGAGTCCTGCCTCTCTGCCCTCGTGCCCCCAGTGGAGACGGCCCTCATCAACCAGCGTG AGGCGTCGCCCATCTCCGTCTACCTATTCCCAGGTGAACGGAGTGGGGCCCCACCCCCTTCACCACCTGTCGGGG TGGACAGTGATGAGTTCTGCATCCTTGATGCTCCCGGCCTGGGCATCCCGCCCCGAGATGGGGAGCCTGTGGTGA CACAGCTGCATCCCGGCCCCATCGTTGTGAGGGACGGTTACTTCTCACGGCCGATCGGCAGCACGGACTTGCTGC GGGCACCTGCCCATTTCCCAGTGCCCAGCACTCGGGTGGTGCTACGTGAGGTCTCCCTCGTCTGGCACCTCTATG GGGGCCGAGACTTTGGCCCCCACCCGGCCACAGGGCAAGAACTGGCCTCTCAGGTCCCAGGAGCTCCCCTTCCC TGGAGATCCAGCTGAGCAAGGTAAGCTTCCAGCACGAGGTGTACCCAGCCGAGCCACCACACGCCCTGCGGCCC CCAGCCAGGAGCTGGAGGACCGCTGTCCCGTCAGGTGTTCATCGTGCAGGAGCTGGAGGTCCGAGACCGGC TCGCCTCCCAGATCAACAAGTTCCTGTACCTACACACGAGTGAGCGGATGCCGCGACGTGCCCACTCTAACA TGATGCCCCTGCGGCTCAATGTGGACCAGGATGCCCTCTTCTTCCTCAAGGACTTCTTCACTAGTCTGGTGGCCG GCATCAACCCCGTGGTCCCAGGGGAGACCTCCGCTGAGGCTCGCCCCGAGACTCGAGCCCAGCCCAGCAGCCCCC $\tt TGGAAGGCCAGGCCGTAGAGACCACTGGTTCGCAGGAGGCCCCAGGAGGTGGACACAGCCCCTCCCCTC$ AGCACGTCACGATGGACCAGGTGGGCACTTTTGCTGGCCTCCTCATCGGCCTGGCCCAACTCAACTGCTCCGAGC TGAAGCTAAAGCGGCTCTGTTGCAGGCACGGGCTCCTGGGTGTGGACAAGGTGCTGGGCTATGCCCTCAACGAGT GGCTGCAGGACATCCGCAAGAACCAGCTGCCCGGCCTGCTGGGAGGCGTGGGCCCCATGCACTCGGTTGTCCAGC TGCAGCGAGGGGCTGCCTCTTTGGCTCATCCACAGCCTCTGCCGCCCTGGAACTCAGCAACCGGTTGGTACAGG CTATCCAGGCCACAGCTGAGACCGTGTATGACATCCTGTCCCCGGCAGCCCCCGTCTCCCGCTCCCTGCAGGATA AGCGCTCTGCGCGGAGGCTGCGCAGGGGCCAGCAGCCTGCCGACCTGCGGGAGGGTGTGGCCAAGGCCTACGACA CAGTGCGAGAGGGCATCTTGGATACAGCTCAGACCATCTGTGACGTGGCATCGCGGGGCCATGAGCAGAAGGGGC TGACGGCCCCTGGGGGGCGTGATCCGCCAGCTGCCCCCGACTGTGGTGAAGCCGCTCATCCTGGCCACGGAGG CCACGTCCAGCCTGCTCGGGGGCATGCGCAACCAGATTGTCCCCGACGCCCACAAGGACCACGCCCTCAAGTGGC GCTCGGACAGTGCCCAAGACTGAGCCTGGGGTGCCCGGCACCCAGAGGGTGCTGCCCACCATGCTCCTGAGCCTC CCAAGAGCTGCAGCCCACGGGCCCGGCCTGGCCCTTCAGGGGATGGCCACTGTGAAGGACGCCTTCCCAG CCTGCCGTTGCCAATCTGCTGTGAGAGGGGGGCCTCCCTGCCTTGGGGCCTTAGCCCTGGCTCTGCACTTTTCC TCCGGGGAGAAAGGACACTGCCCCTCCCCGACCTGGGCCCACACTGCTGCCTTCTCCCAGGACGGAGGCTTTTG TCGATGTATTATTTTTAAGCTCCGTGAGTGCGTGGGTCAGTGTCTGCATGAAGTGGAATAAACTGCCCACCGCC

MSRWLWPWSNCVKERVCRYLLHHYLGHFFQEHLSLDQLSLDLYKGSVALRDIHLEIWSVNEVLESMESPLELVEG FVGSIEVAVPWAALLTDHCTVRVSGLQLTLQPRRGPAPGAADSQSWASCMTTSLQLAQECLRDGLPEPSEPPQPL EGLEMFAQTIETVLRRIKVTFLDTVVRVEHSPGDGERGVAVEVRVQRLEYCDEAVRDPSQAPPVDVHQPPAFLHK LLQLAGVRLHYEELPAQEEPPEPPLQIGSCSGYMELMVKLKQNEAFPGPKLEVAGQLGSLHLLLTPRQLQQLQEL LSAVSLTDHEGLADKLNKSRPLGAEDLWLIEQDLNQQLQAGAVAEPLSPDPLTNPLLNLDNTDLFFSMAGLTSSV ASALSELSLSDVDLASSVRSDMASRRLSAQAHPAGKMAPNPLLDTMRPDSLLKMTLGGVTLTLLQTSAPSSGPPD LATHFFTEFDATKDGPFGSRDFHHLRPRFQRACPCSHVRLTGTAVQLSWELRTGSRGRRTTSMEVHFGQLEVLEC LWPRGTSEPEYTEILTFPGTLGSQASARPCAHLRHTQILRRVPKSRPRRSVACHCHSELALDLANFQADVELGAL DRLAALLRLATVPAEPPAGLLTEPLPAMEQQTVFRLSAPRATLRLRFPIADLRPEPDPWAGQAVRAEQLRLELSE PQFRSELSSGPGPPVPTHLELTCSDLHGIYEDGGKPPVPCLRVSKALDPKSTGRKYFLPQVVVTVNPQSSSTQWE VAPEKGEELELSVESPCELREPEPSPFSSKRTMYETEEMVIPGDPEEMRTFQSRTLALSRCSLEVILPSVHIFLP SKEVYESIYNRINNDLLMWEPADLLPTPDPAAQPSGFPGPSGFWHDSFKMCKSAFKLANCFDLTPDSDSDDEDAH ${\tt FFSVGASGGPQAAAPEAPSLHLQSTFSTLVTVLKGRITALCETKDEGGKRLEAVHGELVLDMEHGTLFSVSQYCG}$ QPGLGYFCLEAEKATLYHRAAVDDYPLPSHLDLPSFAPPAQLAPTIYPSEEGVTERGASGRKGQGRGPHMLSTAV $\verb|RIHLDPHKNVKEFLVTLRLHKATLRHYMALPEQSWHSQLLEFLDVLDDPVLGYLPPTVITILHTHLFSCSVDYRP|$ LYLPVRVLITAETFTLSSNIIMDTSTFLLRFILDDSALYLSDKCEVETLDLRRDYVCVLDVDLLELVIKTWKGST EGKLSQPLFELRCSNNVVHVHSCADSCALLVNLLQYVMSTGDLHPPPRPPSPTEIAGQKLSESPASLPSCPPVET ALINQRDLADALLDTERSLRELAQPSGGHLPQASPISVYLFPGERSGAPPPSPPVGGPAGSLGSCSEEKEDEREE EGDGDTLDSDEFCILDAPGLGIPPRDGEPVVTQLHPGPIVVRDGYFSRPIGSTDLLRAPAHFPVPSTRVVLREVS LVWHLYGGRDFGPHPGHRARTGLSGPRSSPSRCSGPNRPQNSWRTQGGSGRQHHVLMEIQLSKVSFQHEVYPAEP ATGPAAPSQELEERPLSRQVFIVQELEVRDRLASSQINKFLYLHTSERMPRRAHSNMLTIKALHVAPTTNLGGPE CCLRVSLMPLRLNVDQDALFFLKDFFTSLVAGINPVVPGETSAEARPETRAQPSSPLEGQAEGVETTGSQEAPGG GHSPSPPDQQPIYFREFRFTSEVPIWLDYHGKHVTMDQVGTFAGLLIGLAQLNCSELKLKRLCCRHGLLGVDKVL GYALNEWLQDIRKNQLPGLLGGVGPMHSVVQLFQGFRDLLWLPIEQYRKDGRLMRGLQRGAASFGSSTASAALEL SNRLVQAIQATAETVYDILSPAAPVSRSLQDKRSARRLRRGQQPADLREGVAKAYDTVREGILDTAQTICDVASR GHEQKGLTGAVGGVIRQLPPTVVKPLILATEATSSLLGGMRNQIVPDAHKDHALKWRSDSAQD

TGCCCTGAGCTGCCACCGGGAAGCCAGCCTCAGGGACTGCAGCGACCCCCAAACACCCCTCCCCCAGGATGTCGG AGGAGATCATCACGCCGGTGTACTGCACTGGGGTGTCAGCCCAAGTGCAGAAGCAGCGGGCCAGGGAGCTGGGCC TGGGCCGCCATGAGAATGCCATCAAGTACCTGGGCCAGGATTATGAGCAGCTGCGGGTGCGATGCCTGCAGAGTG GGACCCTCTTCCGTGATGAGGCCTTCCCCCCGGTACCCCAGAGCCTGGGTTACAAGGACCTGGGTCCCAATTCCT ACACCCTCCTGCACCGAGTGGTTCCGCACGGCCAGAGCTTCCAGAATGGCTATGCCGGCATCTTCCATTTCCAGC TGTGGCAATTTGGGGAGTGGGTGGACGTGGTCGTGGATGACCTGCTCCCATCAAGGACGGGAAGCTAGTGTTCG TGCACTCTGCCGAAGGCAACGAGTTCTGGAGCGCCCTGCTTGAGAAGGCCTATGCCAAGGTAAATGGCAGCTACG AGGCCCTGTCAGGGGGCAGCACCTCAGAGGGCTTTGAGGACTTCACAGGCGGGGTTACCGAGTGGTACGAGTTGC GCAAGGCTCCCAGTGACCTCTACCAGATCATCCTCAAGGCGCTGGAGCGGGGCTCCTGCTGGGCTGCTCCATAGA CATCTCCAGCGTTCTAGACATGGAGGCCATCACTTTCAAGAAGTTGGTGAAGGGCCCATGCCTACTCTGTGACCGG GGCCAAGCAGGTGAACTACCGAGGCCAGGTGGTGAGCCTGATCCGGATGCGGAACCCCTGGGGCGAGGTGGAGTG GACGGGAGCCTGGAGCGACAGCTCCTCAGAGTGGAACAACGTGGACCCATATGAACGGGACCAGCTCCGGGTCAA GATGGAGGACGGGGAGTTCTGGATGTCATTCCGAGACTTCATGCGGGAGTTCACCCGGCCTGGAGATCTGCAACCT CACACCCGACGCCTCAAGAGCCGGACCATCCGCAAATGGAACACCACACTCTACGAAGGCACCTGGCGGCGGG GAGCACCGCGGGGGGCTGCCGAAACTACCCAGCCACCTTCTGGGTGAACCCTCAGTTCAAGATCCGGCTGGATGA GACGGATGACCCGGACGACTACGGGGACCGCGAGTCAGGCTGCAGCTTCGTGCTCGCCCTTATGCAGAAGCACCG TCGCCGCGAGGCCGCTTCGGCCGCGACATGGAGACTATTGGCTTCGCGGTCTACGAGGTCCCTCCGGAGCTGGTC GCGAGCCGGCCGTACACTTGAAGCGTGACTTCTTCCTGGCCAATGCGTCTCGGGCGCGCTCAGAGCAGTTCATCA ACCTGCGAGAGGTCAGCACCCGCTTCCGCCTGCCACCCGGGGAGTATGTGGTGGTGCCCTCCACCTTCGAGCCCA ACAAGGAGGCGACTTCGTGCTGCGCTTCTTCTCAGAGAAGAGTGCTGGGACTGTGGAGCTGGATGACCAGATCC AGGCCAATCTCCCCGATGAGCAAGTGCTCTCAGAAGAGGGGGAGTTGACGAGAACTTCAAGGCCCTCTTCAGGCAGC TGGCAGGGGAGACATGGAGATCAGCGTGAAGGAGTTGCGGACAATCCTCAATAGGATCATCAGCAAACACAAAG ACCTGCGGACCAAGGGCTTCAGCCTAGAGTCGTGCCGCAGCATGGTGAACCTCATGGATCGTGATGGCAATGGGA AGCTGGGCCTGGTGGAGTTCAACATCCTGTGGAACCGCATCCGGAATTACCTGTCCATCTTCCGGAAGTTTGACC TGGACAAGTCGGGCAGCATGAGTGCCTACGAGATGCGGATGGCCATTGAGTCGGCAGGCTTCAAGCTCAACAAGA AGCTGTACGAGCTCATCATCACCCGCTACTCGGAGCCCGACCTGGCGGTCGACTTTGACAATTTCGTTTGCTGCC GGCAGCCTCGTCCTCCTCCTCCCCAGCCACCATCGTTCATCTGCTCCGGGCAGAACTGTGTGGCCCC TTGTTCCTGCCTCGGGACAGCCCCGGGTTTCCCCAGCATCCTGATGTGTCCCCTCTCCCCACTTCAGAGGCCACC CACTCAGCACCACCGGCCTGGCCTTGCCTGCAGACTATAAACTATAACCACTAGCTCGACACAGTCTGCAGTCCA GGCGTGTGGAGCCGCCTCCCGGCTCGGGGAGGCCCCGGGGCTGGGAACGCCTGTGCCTTCCTGCGCCGAAGCCAA CGCCCCTCTGTCCTTCCCTGGCCCTGCTGCCGACCAGGAGCTGCCCAGCCTGTGGGCGGTCGGCCTTCCCTCCT TCGCTCCTTTTTTATATTAGTGATTTTAAAGGGGACTCTTCAGGGACTTGTGTACTGGTTATGGGGGTGCCAGAG GCACTAGGCTTGGGGTGGGGAGGTCCCGTGTTCCATATAGAGGAACCCCAAATAATAAAAGGCCCCACATCTGTC TGTG

GTAGCAGGTAAAGATGGCAGCTACCATGTTCCGGGCTACGCTGCGGGGATGGAGAACCGGTGTCCAGCGGGGCTG CGGGCTACGGCTGTTGAGCCAGACCCAGGGCCCTCCAGATTACCCCAGGTTTGTGGAGTCTGTGGATGAATATCA GTTTGTGGAGCGCCTGTTACCGGCTACCAGGATCCCAGATCCCCCAAAGCATGAACATTATCCTACCCCTAGTGG CTGGCAGCCTCCCAGAGACCCCCACCCAACCTGCCTTACTTTGTACGACGCTCTCGGATGCACAACATCCCCGT CTACAAGGACATCACGCATGGCAACCGGCAGATGACTGTGATCCGGAAAGTGGAAGGGGACATCTGGGCCCTGCA GAAAGACGTGGAAGATTTTCTGAGCCCGCTGCTGGGGAAGACACCTGTCACCCAGGTCAATGAGGTGACAGGTAC CCTACGGATCAAGGGCTACTTTGACCAGGAGCTTAAAGCCTGGCTCTTGGAGAAAGGCTTCTGAGGCCCAGCCGA TCTATGTACATGCTGGGGGAGAGTGCCTAATGTGGGAGACCAAATAGGGATCACCAGGCTAATGGGGGGCGTCAG CAGCTTTCTCCCCTCCTATCTTGGCCTGTTCTTTTTTGTTTTTTTGAGACGGAGTCTCACTCTGTTGCCCAGGGT GGAGTGCAGTGGCATGATCTTGGCTCACTGCAACTTCCACCTCTGGGATCAAGGGATTCTCCTGCCTCAGCCTCT TGAGTAGCTGGGATTACAGGCGCCCACCACCACGCTGCTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCAC CATGTTGGCCAGGCTGGTCTCAAACTCCTGACTCGAAGTGATCCGCCCACCTTGGCCTCCCAAAGCGTTGGGATT TAGTTGTTATTTGGTGGAAGCAGTAGCCCAACCCCAGTTTAGGGGAAGGTAGCACAGGGCAGAGCCACTGGGCAC TTTGTTTCCTTGGCCCTCCGAAGCTCACTGTTGCAAATACCCCCAAGCCTTTGCTCTAGGCCAGATCTTGTTTGG TGCAGGTGATGGAGAACACAGATGACTCGGGCATGGGTCTTGGAGATCTTCTGTTCAAAGTACAGTGCTGGCACT GGGGCACAGAGTGCCCACGTTAGCCCCGGGCTCTGATAGAGAGGTAGGAGGCACGTTCTTGGTCACTGTTCCATT ${\tt TCCCAACCCCAGCTCACTAGCCTTCATATATGCCTTATACTTGGAGTCACAGGGGCCAAAGGCCTGAGACCCCAC}$ CCTGCCCCAAACTGGCTAAGACAGCTTTCAGTTCCTGACTCCCCAACTTGGTCTCTGCCCTGAAGCAGGGCACT GAACTCTGGGCTGCTTCTCTGTGTGAAAATGGGCACATCTTCCTAATCTGTTAATGGTCAGTGGTGTCCCCAAG GATAGTGCTGGCTTCCATGGAAACCCTCACTCCTGGAGATTCCATTTCCAAGTGTACAGCCACAGCAAGG AGCCCGACACTGATTTGATCGATTCTGTGACACAAACCCCACCAATTGTTAATGCAAGTTTTTATTTGGCTGTAT ATACAATTTAAGCTATTAAAATTTGTACAATATTTACAAATTAAA

 $\label{thm:continuous} {\tt MAATMFRATLRGWRTGVQRGCGLRLLSQTQGPPDYPRFVESVDEYQFVERLLPATRIPDPPKHEHYPTPSGWQPPRDPPPNLPYFVRRSRMHNIPVYKDITHGNRQMTVIRKVEGDIWALQKDVEDFLSPLLGKTPVTQVNEVTGTLRIKGYFDQELKAWLLEKGF$

GTCCAGGCAGGTGCAGGCGCGGGGCCGGATCCTCCGCGCGGCCGAGTCCATCTCCTGGGAAATGGGGCGGAC $\verb|CCCGGGCCCGCTGGAATTCGGAGGGCCCCTGGGCGCCGCGGCTCTGCTACTGCTGCTGCCGCCACCATGTTCC| \\$ GCAAGGTGGCCGAGGGCAGGAATTGAAGGACAAGAGTCGCCTGCGCTATCCTATTAACGGCTTCCAGGCCCTGG TGCTGACAGCCCTGTTGGTGGGGCTGGGGATGTCAGCGGGGCTGCCTCTGGGGGGCGCTCCCGGAAATGCTCCTGC $\tt TTTCGGCCCTGGCACCTGGGGGGAACTCAGGCAATCCGATTTACGACTTTTTCTGGGACGAGGGCTCAACCCTC$ GTATCTGTTTCTTCGACTTCAAATATTTCTGTGAACTGCGACCCGGCCTCATCGGCTGGGTCCTCATCAACCTGG $\tt CCCTGTTGATGAAGGAGGCAGAGCTTCGAGGCAGTCCCTCACTGGCCATGTGGCTGGTCAATGGCTTCCAGTTGC$ TCTACGTGGGTGATGCCCTCTGGCACGAGGAGGCCGTCCTCACCACCATGGATATCACACATGACGGGTTTGGCT TCATGCTGGCGTTTGGGGACATGGCCTGGGTGCCCTTCACCTACAGCCTGCAGGCCCAGTTCCTGCACCACCC CGCAGCCCTGGGGTTGCCCATGGCCTCTGTCATCTGCCTCATCAATGCTACTGGTTACTACATCTTCCGTGGGG CGAATTCCCAGAAAAACACTTTCCGAAAGAATCCTTCTGACCCCAGAGTGGCTGGGCTTGAGACCATCTCTACAG CCACAGGGCGGAAACTGCTGGTGTCTGGGTGGTGGGGTATGGTCCGCCATCCCAACTATCTTGGAGACCTCATCA TGGCTCTGGCTTGGTCCTTGCCCTGCGGGGTGTCACACCTGCTGCCCTACTTCTACCTCCTCTACTTCACCGCGC TGCTGGTGCACCGTGAGGCCCGGGATGAGCGGCAGTGCCTGCAGAAGTACGGCCTGGCCTGGCAGGAGTACTGCC GGCGTGTGCCTTACCGCATCATGCCCTACATCTACTGAAGCGGCTCCACCACCCCAGGTGGGGGCATGTGCCCAC AGGATGAACAACCTCAGAGAAGAGGTGGTTTAGAGCAAGGAAAAAAATGAAACCAGTGACC

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GAGGGATAATCGGGGCCGGCCCGGGCTGAAGGGAGAGGCCCAGGAGCCCTGGGGAGAGTGGTCCCTGCCCTTCCGC ATGGGGCTTTGTAAGTGCCCCAAGAGAAAGGTGACCAACCTGTTCTGCTTCGAACATCGGGTCAACGTCTGCGAG CACTGCCTGGTAGCCAATCACGCCAAGTGCATCGTCCAGTCCTACCTGCAATGGCTCCAAGATAGCGACTACAAC CCCAATTGCCGCCTGTGCAACATACCCCTGGCCAGCCGAGAGACCCCGCCTTGTCTGCTATGATCTCTTTCAC ${\tt TGGGCCTGCCTCAATGAACGTGCCCAGCTACCCCGAAACACGGCACCTGCCGGCTATCAGTGCCCCAGCTGC}$ AACTGGGCCCGGGCAGGACTGGGCCTCCCTCTGATCGATGAGGTGGTGAGCCCAGAGCCCGAGCCCCTCAACACG ${\tt TCTGACTTCTCTGACTGGTCTAGTTTTAATGCCAGCAGTACCCCTGGACCAGAGGAGGTAGACAGCGCCTCTGCT}$ ATGGGCAATCCTGAGCCCTTGACTCACGCCCCTAGGAAGGTGTATGATACGCGGGATGATGACCGGACACCAGGC TTCCTGGCCCTCCTTGCCCTCATGTCTCGCCTAGGCCGGGCCGCAGCTGACAGCGATCCCAACCTGGACCCACTC GTGGAGGAGAGGCGGGTAATGGGGAGGCTGAGGGCACCTCTTCACTGCCCCTCTCCCTCAAGCCTAAGACACTA AGACCCCAGACCCAAAGCCAAGTCCACCAGAGTGGCTGCAGGCCAGGCCTGGAGTCCCCGTGGGTCAAGCATTTG TCTTGACTTGCTTTCCTCCCGGGTCTCCAGCCTCCGACCCCTCGCCCCATGAAGGAGCTGGCAGGTGGAAATAAA CAACAACTTTATTAAAAC

MGLCKCPKRKVTNLFCFEHRVNVCEHCLVANHAKCIVQSYLQWLQDSDYNPNCRLCNIPLASRETTRLVCYDLFH WACLNERAAQLPRNTAPAGYQCPSCNGPIFPPTNLAGPVASALREKLATVNWARAGLGLPLIDEVVSPEPEPLNT SDFSDWSSFNASSTPGPEEVDSASAAPAFYSQAPRPPASPGRPEQHTVIHMGNPEPLTHAPRKVYDTRDDDRTPG LHGDCDDDKYRRPALGWLARLLRSRAGSRKRPLTLLQRAGLLLLLGLLGFLALLALMSRLGRAAADSDPNLDPL MNPHIRVGPS

TGTCTGGGAGGCGAACGCGGTCCGGAGGAGCCGCTCAGCGCTCCGGGCCAAGGGCCCCATCTCCTACTAAGCCTC TGCGGAGGTCCCAGCGGAAATCAGGCTCTGAACTCCCGAGCATCCTCCCTGAAATCTGGCCGAAGACACCCAGTG ${\tt CGGCTGCAGTCAGAAAGCCCATCGTCTTAAAGAGGATCGTGGCCCATGCTGTAGAGGTCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAGCTGTCCAATCACCCCAATCACCCCAGCTGTCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCCAATCACCCAATCACCCAATCACCCCAATCACCCAATCACCAATCACCCCAATCACCAATCACCAATCACCAATCACCAATCACCAATCACCAATCACCAATCACCAATCACCAATCACAATCACCAATCACAATCACCAATCACAATCACCAATCACAATCACAATCACAATCACCAATCACAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAA$ ACCTTTCAAGACACAGCGTCCCTGCCACCCCCACCAGCACTCCTGTGCCGAACCCTGAGGCCGAGTCCAGCT CCAAGGAAGGAGGCTGGACGCCAGAGACTTGGAAATGTCTAAGAAAGTCAGGCGTTCCTACAGCCGGCTGGAGA CCCTGGGCTCTGCCTCTACCTCCACCCCAGGCCGCCGGTCCTGCTTTGGCTTCGAGGGGCTGCTGGGGGCAGAAG CAGACATGACTCTCCCTGGAATCTCCCCACCCGAGAAACAGAAACGTAAGAAGAAAATGCCAGAGATCT TGAAAACGGAGCTGGATGAGTGGGCTGCGGCCATGAATGCCGAGTTTGAAGCTGCTGAGCAGTTTGATCTCCTGG TCCTGTCTCTTGTCGTCCTGTCCTTCCTATCTCCCCAAAGTACCATAGCCAGTTTCCAGATGGGCCACAGACTGG GGAGGAGAATCAGTGGCCCAGCCAGAAGTTAAAGGGCTGAGGGTTGAGGTGAGAGGCACCTCTGCTCTTGTTGGG AGGGGTGGCTGCTTGGAAATAGGCCCAGGGCTCTGCCAGCCTCGGCCTCTCCTGAGTTGCCTTCTGTTGGT GGCTTTCTTCTTGAACCCACCTGTGTAAAGAGGTTTTCAGTTCCGTGGGTTTCCCCTTTGATTCTGTAAATAGTC CCAGAGAGAATTCGTGGGCTGAGGGCAATTCTGTCTTGGAGGAAGAAGCTGGACATTCAGCCTGTGGAGTCTGAG TTTTGAAGGATGTAGGGAGCCTTAGTTGGGTCTCAGACCATAAGTGTGTACTACACAGAAGCTGTGTTTTCTAGT CAGGGTGTGGCCACCAGGTGCTGTGAGTTTCTGTGGCTCATGGCCTCTGGGCTGGTCCCTTGCACAGGGCCCACG CTGGAGTCTTACCACTCTGCTGCAGGGGTGGAAGGTGGCCCCTCTTGTCACCCATACCCATTTCTTACAAAATAA GTTACACCGAGTCTACTTGGCCCTAGAAGAGAAAGTTGAAGAGTCCCAGACCTACTAGCATTTTGCAACTATGCT TGTAAAGTCCTCGGAAAGTTTCCTCGCGTACCAGACAGCGGCGGGGGCTGATAGCAATTTTAGTTTTTTGGCCTCC CTATCCTCTCACATGAGAACACTGCCTGGATGCATCTCATGATCTCTGGAGAATTTCCCCATCTTTCTCTTTT CCATCGTGTGGATTCAATAGTGTGGATTTGAAGGCTGCCCTGCCCCCGACTCTCCTGCCGCACCCCTGGCCATTG TACCTTTTGATGTTTAGAAGTTCGTGGAAGTAGACGCTGAGGTGTGCAGAGGAGCTGGTGGATAACAGAGAATGC CAGGGAAGATGAGTGCTGGGTCAGGGTACTTGGATGAAACGGTGCAGGCCAGGCCGGGCCCTAATAAAACCCTCTG CCAGGTCTGGGAGTCCCAGGCCATCTGCTCAACGCTCTGTGGTTTGTCAGACCTGCAAGCCAAGCCCCCTGCTGGG GAAGCCTAGGTGTCCTTGAGCTGAACCGCACTGAAGAACTCTTGTCCTCACTGGCTGATGCAGCAGAACTCTTGG GAAATGTCTTAGTCCTGCAGAATCAGGAGTCACCAGATGATGCAGAGTTGAGATCATCATTGCAAAGTTCTCTGT TGCCTGTT

MGLLTILKKMKQKERELRLLMLGLDNAGKTTILKKFNGEDIDTISPTLGFNIKTLEHRGFKLNIWDVGGQKSLRS YWRNYFESTDGLIWVVDSADRQRMQDCQRELQSLLVEERLAGATLLIFANKQDLPGALSSNAIREALELDSIRSH HWCIQGCSAVTGENLLPGIDWLLDDISSRIFTAD

GGCCTGAGGGCGCCGCACTCGACTGCTTCGAGGTGACGCTGAAATGCGAGGAAGGGAGGACGACGAGGAGGAGGACGA TGGTGGTGGCCGTAATTCCGCGGCCCGAGCCGATGCTCAGAGTGACCCAACAGGAGAAGACCCCACCGCCTAGAC CCAGCCGCTAGAGGCAGCAGTGATGGCTGTGAGGAGCCGAAGCAGCAGGTGTCTTGGGAGCAGGAGTTCCTGG TGGGCAGCAGCCCAGGAGGCAGCGGGCGCACTGTGCATGGTGTGTGGCGCTGAGATCCGGGCACCCTCGGCCG ${\tt ACACAGCTCGCACATCTTGGAGCAGCACCCTCACACCTTGGACCCTTGAGAGCCCTTCTGAGAAGAGCCAATATCC}$ CGGGCCAGGATGCCCACCCAGACCCAGACGCCAACCCAGACGCTGCCAGAATGCCAGCCGAAATCGTCGTTCTCC TTGACTCTGAGGATAACCCATCCCTCAAAAGGAGCCCAGGGGACTCCGCCCCTCGAGCTTCCTGCTG GAAAGAAAAGAGGCAGACCTATGACCAAAAACCTGGACCCTGACCCAGAGCCCCCATCGCCAGACTCGCCCACGG $\verb|CCCGGGCGGAGAGCCCCTCTCCAGCTCCCCTTCCGGGGGTCCCCGGGGACACTGGATCTCCAGGTTATCCGCGTGC|\\$ GGATGGAGGAGCCCCCAGCGGTCAGCCTCCTGCAAGACTGGTCCAGGCACCCCAGGGCACCAAGCGTGTGGGAG CAGGTGACACCTCAGACTGGCCCACAGTTCTGTCAGAATCCAGCACCACTGTGGCAGGGAAGCCGGAAAAAGGGA $\tt CTGTTATTTCGGGGCACTGGAAAGTGTCTGTTCCTGGCCAGGCCTGAGGTCGGCGAGGGTGGCTGAGGCTGTTGT$ GCAGTAGGGCACTGGGCCTGTGGAGAACACCTACCCCAGTCCTTCGCTGACCCCCACCTCTGTTTGTCCCCCATG ACCTCCTCCCACCTCCCCCTGCTCCCCACCATTCTCCCTTGGCACAGTGCCTTACACAAGAGTGGTCATAAGGG GGTTTGAACTGAGTCCCACTACCTCGGGGGACACCTCTCCTCCCCACTTGTTCAGGCTTCTAAACCAGGAGGCCT CCATTACCTCTTCCTGTCCCACCCCTGCAGAGGCCTGAAGCTGGGCCTGGGCACCCCATTCACTCCGTTCTCAT

GCGCCCAGCCGCTGAACGGCGTGGGCAGGTGGGCGGTGCGGTTCCAGGGCGCCCCGAGGACAGGGGGCCCCCGACT TCAGGGGAACCCCAACCCTGAGGGGGCGTACATAGTAATCACGCCCCAGCCGCACCGGACCTTGCGCTCATCCCTT GCGTCCCCCACTTCTGCACAAACTTTTCTGACGCCCTGGCTCGTGGGGGTCGTGGAGAGCGCTGGGGCTACCAGG TGGGCTCCCACCCGGCGGACCCTAGCCACGCTGACCTCCTGCCTCTCCTAACCTCAGTGGCGACCTCTCCAGGC CGGGCCGGGCTCGGCACTCGGAGCGAGTGCGGCAACCACTGTCGCTCTCCGAAGGCTCCTGCGCCCCCGGGGCA GCTGGGCGGGTAATGCCCTCAGTGATGGAGAAGCCGAGCGCGGGCTCTGGGATCCTGTCCCGTAGCCGGGCCAA GACGGTGCCCAACGGCGGACAGCCCCACTCGGAGGATGACAGCAGCGAGGAGGAGCACTCGCACGTCCCTTCTGT GGCTGCAGACAGCATGATCCGCGTTGGAACCAATTACCAGGCCGTAATTCCGGAGTGCAAGCCTGAGAGCCCCGC ACGCTACAGCAACAAGGAGCTGAAGGGGATGCTGGTGTGGTCACCCAACCACTGTGTGTCAGATGCCAAGCTTGA GCACGATGTGGAGAAGTCGCTGGCCGACCTGGCCAACTTCACCCCATTCCCTGACGAGTGGACAGTAGAGGACAA GGTGCTGTTTGAACAGGCCTTTGGCTTCCATGGCAAATGCTTCCAGCGGATCCAGCAGATGCTGCCTGACAAGTT AGAGCCCGATCCTGCAGATCCCAAGAGAGAGCCTCTACCCTCTCGGCCCCTGAATGCACGCCCAGGCCCTGGGAA GAGCCCTGAAGGCCTCACGGCAGTGTCAGGAAGCCCGGACCTTGCCAACCTCACGCTCCGAGGTCTTGACTCTCA GCTCATCTCCCTCAAGCGCCAGGTACAGAGCATGAAGCAGACGAACAGCCCTGCGCCAAGCCCTGGAGGGCGG TATTGATCCACTACGCCCCCGGAGGCCAACACCAAGTTCAACTCCCGCTGGACCACAGATGAGCAGCTTTTGGC TGTTCAAGCCATCCGTAGGTATGGCAAAGACTTTGGGGCTATTGCAGAGGTGATTGGGAACAAGACTCTGACCCA GGTGAAGACTTTCTTTGTGAGCTACCGGCGCCGCTTCAATCTGGAGGAGGTGCTGCAGGAATGGGAGGCTGAGCA GGATGGGGCCCCTGGAGCCCCAGTCCCCATGGAGGGGGCTAGGAGGGGGCTCCATTGCCAGCCCCAGCCCTAGA GGAAGATGATGAGGTCCAGATTACATCGGTCTCCACGTCCGTGCCCCGATCAGTGCCCCCTGCGCCACCACCCCC TCCACCTCCCACCTCGCTGTCCCAGCCACCCCCGCTGCTGAGGCCACCTTTGCCCACGGCTCCCACTCTGCTCCG ACAGCCACCCCACTGCAGCAGGGCCGCTTCCTCCAGCCCCGGCTGGCCCCCAACCAGCCCCCACCGCCTCTCAT TCTGGAGCCCCCAGCACCCTCACTCTGAGCCCTGACGTCCTCCACCACCACCACGGGCTCCAGGACCCCTTTGCTGG TTTCGGACAGCCCAGCCCCGCCCTTTGGGTTCTGCATGTTCTCTGGCAGCTGGGCCTGTCTCCTGGGGCCATGG TCTGCTGGGGCTTGGCCTCTGGGTCCTGCCCTTTGTGTGTCCGGGGTAGTGACCTTAGCGTGGAGTGGGGAGAGG GCAGTTGGGTGTGCTGGCTGTTCTCATTCCTCTTTCCCTTCTTTTAGCAATAAGTCTGGGGTGAGGTGGGGAGGG AGGCTGCAGGGGGGGGGGCCAGAGGGGCCTTACAGCAGCAGAGGCTGGAAGAGAAGCTCTGTCTTCAGGGGC CAGCTGGGAAATGCTAAGGAGCTGAGGGTGCCCACCAAGCCCACCTTCCAGAAACTTGGAGAAATGGGGGTTGGG

CCTCGTGCCGCAGTTCTGCCACCGTCACTGAGAAGCTCAGCGGTAGCTTTTGGGAAGCAGGACGTTCTCACCAGG AGAGCGTCCTCTCGAGATTTCTGCTCCCTCCATTCAGGGCGTTTGGGAGCCACCCCTTCATTTTTTAAAAAAAGT $\texttt{GAGCTGGGTGGGCCGGCCCCTGGCTTGGGCGACC} \underline{\textbf{ATG}} \texttt{TCCGCATCCGCCCAGCAGCTGGCGGAGGAG}$ $\verb|CTGCAGATCTTCGGCCTAGACTGCGAGGGGGCTCTAATTGAGAAATTGGTAGAGCTTTGTGTTCAGTATGGACAG|\\$ AATGAGGAGGGAATGGTAGGCGAGCTTATAGCCTTCTGCACCAGCACACATAAAGTTGGCCTTACCTCAGAGATC CTGAACTCTTTTGAGCATGAGTTTCTGAGCAAAAGATTATCGAAAGCCAGGCATAGTACCTGCAAGGACAGTGGC CATGCAGGAGCTAGAGACATTGTTTCCATTCAAGAGCTAATTGAAGTGGAAGAAGAAGAAGAAATCCTCTTGAAC TCTTACACCACACCTTCAAAGGGTTCTCAGAAGCGAGCTATCTCTACCCCAGAAACCCCCCTAACAAAAAGGAGT AACTCACGAAGTAACCGAGGAGAAGTGGTTACCTCCTTCGGCTTAGCACAGGGAGTATCTTGGTCTGGGAGAGGA GGAGCTGGAAACATCAGCCTGAAGGTCTTGGGATGTCCAGAGGCACTAACTGGGAGCTACAAATCCATGTTTCAG AAGCTCCCAGACATTCGAGAAGTTCTGACCTGTAAGATAGAAGAACTTGGCAGCGAACTCAAGGAACATTACAAG ATTGAAGCTTTCACTCCTTTGCTAGCCCCAGCACAGGAGCCTGTCACTCTGCTGGGCCAGATTGGCTGTGATAGC AACGGGAAGCTGAACAACAAGTCAGTGATTCTCGAGGGAGACCGGGAACATTCCTCGGGTGCTCAAATTCCAGTG ${\tt AGGAAACTTGTTGCCACCAAACTCTACGAGGGTGTGCCACTTCCATTTTATCAGCCCACTGAAGAGGATGCAGAC}$ TTTGAGCAAAGCATGGTCCTGGTTGCCTGTGGACCATACACCACATCTGACAGCATCACGTATGACCCCCTGCTT GACCTGATTGCTGTCATCAACCATGACCGGCCAGATGTCTGCATCCTGTTTGGCCCTTTCCTGGATGCTAAGCAT GAACAGGTGGAGAATTGTCTACTGACAAGTCCATTTGAAGACATTTTCAAGCAGTGTCTACGAACAATTATTGAA GGCACAAGAAGCTCCGGCTCCCACCTTGTCTTTGTCCCGTCATTGAGAGATGTGCACCATGAGCCTGTGTACCCC CAGCCGCCTTTCAGCTACTCCGATCTGTCTCGAGAGGACAAAAAGCAAGTACAGTTTGTGTCCGAGCCCTGCAGC CTCTCCATAAACGGAGTGATCTTCGGCTTGACATCCACAGATCTGCTTTTCCACCTGGGGGCCGAGGAGATCAGT AGTTCTTCCGGAACTTCAGACAGATTCAGCCGAATACTCAAGCACATCTTGACCCAGAGGAGCTACTACCCACTC TACCCGCCCCAAGAAGACATGGCCATTGACTATGAGTCGTTCTATGTTTACGCACAGCTGCCTGTCACCCCAGAT GTCCTCATCATCCCGTCAGAGCTGAGGTACTTCGTGAAGGATGTCCTCGGCTGTGTCTGTGTGAACCCTGGGCGC CTTACCAAAGGCCAGGTGGGAGGCACCTTCGCCCGACTCTACCTTAGGAGGCCGGCAGCGGACGGGCAGAGAGG ${\tt CAGAGCCCATGCATTGCTGTGCAGGTCGTCAGGATC} \underline{{\tt TGA}}{\tt GGCTTCTGTCCTGTGTTGTCTGTGTGTGGGGCC}$ GCCTCTCCTGGAAGGAAGCTCTTGCTTCTCAGTCCATGCTCCGTGTCCAGAAGTAAGCCAGCTGTGGATCCCGCC CACTCAGAAAAGGCGAGAAGGCTTTGTGATTTTCTACATGAATCAAACACAGAAACAACTTTTGGAGAAATTAAA

MSASAQQLAEELQIFGLDCEEALIEKLVELCVQYGQNEEGMVGELIAFCTSTHKVGLTSEILNSFEHEFLSKRLS
KARHSTCKDSGHAGARDIVSIQELIEVEEEEEILLNSYTTPSKGSQKRAISTPETPLTKRSVSTRSPHQLLSPSS
FSPSATPSQKYNSRSNRGEVVTSFGLAQGVSWSGRGGAGNISLKVLGCPEALTGSYKSMFQKLPDIREVLTCKIE
ELGSELKEHYKIEAFTPLLAPAQEPVTLLGQIGCDSNGKLNNKSVILEGDREHSSGAQIPVDLSELKEYSLFPGQ
VVIMEGINTTGRKLVATKLYEGVPLPFYQPTEEDADFEQSMVLVACGPYTTSDSITYDPLLDLIAVINHDRPDVC
ILFGPFLDAKHEQVENCLLTSPFEDIFKQCLRTIIEGTRSSGSHLVFVPSLRDVHHEPVYPQPPFSYSDLSREDK
KQVQFVSEPCSLSINGVIFGLTSTDLLFHLGAEEISSSSGTSDRFSRILKHILTQRSYYPLYPPQEDMAIDYESF
YVYAQLPVTPDVLIIPSELRYFVKDVLGCVCVNPGRLTKGQVGGTFARLYLRRPAADGAERQSPCIAVQVVRI

3566/6881 FIGURE 3291A

AGTGTTGGTTAAGTTGTTGCTTGGAAGTGAGAAGTTGCTTAGAAACTTTCCAAAGTGCTTAGAACTTTAAGTGCA AACAGACAAACTAACAAACAAAATTGTTTTGCTTTGCTACAAGGTGGGGAAGACTGAAGAAGTGTTAACTGAAA ATCAAGTGAATTAGTCACTTGAAAGATGGGCGTCAGACTTGCATACGCAGCAGCATCAGCATCCTTCGCTGCCCCT TAGCAACTTAGGTGGTTGATTTGAAACTGTGAAGGTGTGATTTTTTCAGGAGCTGGAAGTCTTAGAAAAGCCTTG TAAATGCCTATATTGTGGGCTTTTAACGTATTTAAGGGACCACTTAAGACGAGATTAGATGGGCTCTTCTGGATT TGTTCCTCATTTGTCACAGGTGTCTTGTGATTGAAAATCATGAGCGAAGTGAAATTGCATTGAATTTCAAGGGAA TTTAGTATGTAAATCGTGCCTTAGAAACACATCTGTTGTCTTTTCTGTGTTTTGGTCGATATTAATAATGGCAAAA TTTTTGCCTATCTAGTATCTTCAAATTGTAGTCTTTGTAACAACCAAATAACCTTTTGTGGTCACTGTAAAATTA TTGTGCTTTTTAAATGAGCCAAGACTAGAGGGGAAACTATCACCTAAAATCAGTTTGGAAAAACAAGACCTAAAAA GGGAAGGGGATGGGGATTGTGGGGAGAGAGTGGGCGAGGTGCCTTTACTACATGTGTGATCTGAAAACCCTGCTT GGTTCTGAGCTGCGTCTATTGAATTGGTAAAGTAATACCAATGGCTTTTTATCATTTCCTTCTTCCCTTTAAGTT TCACTTGAAATTTTAAAAATCATGGTTATTTTTATCGTTGGGATCTTTCTGTCTTCTGGGTTCCATTTTTTAAAT GTTTAAAAATATGTTGACATGGTAGTTCAGTTCTTAACCAATGACTTGGGGATGATGCAAACAATTACTGTCGTT GGGATTTAGAGTGTATTAGTCACGCATGTATGGGGAAGTAGTCTCGGGTATGCTGTGAAATTGAAACTGTAA AAGTAGATGGTTGAAAGTACTGGTATGTTGCTCTGTATGGTAAGAACTAATTCTGTTACGTCATGTACATAATTA CTAATCACTTTTCTTCCCCTTTACAGCACAAATAAAGTTTGAGTTCTAAACTCATTAGAATTGTTGTATTGCTAT GTTACATTTCTCGACCCCTATCACATTGCCTTCATAACGACTTTGGATGTATCTTCATATTGTAGATTTAGGTCT AGATTTGCTAGCTCCAAGTAATTAAGGCCATGTAGGAGAGCATGGTAACCACAGATAGAACTGGTATTATCCCAA GTGGTCTGCAGACTGCTGAGTGGGGATGGGATCTGCTCTCTGTTGAGAGTTGGTAATCATTGGTTTGAAAATGTGA TGAAACCACTCAAGCCAATGAAGGTGGGTGTGTAGGTGGGGAGTACTTTGCCATAATATTTTAAAACATTACCTG GTTAGAGTTCTAAGTGGTACTTATTTTTGTTTGGTTAGGGGAAAGCCTGAATAAAAACAGAAATGGACACATAAT ATGCATATTCCATAGTCTTTGGGAGGCTGGAATGTGCCTGGGATTTGGGTCTAAGTGTATGCGTAATTCTTACCT AGTAAGCAAGCAGAGGCTGTGCAAAGGTGTGAGCAGGATCACGTGGAATCTGGAGGATACATCTTGGCTTGCAAA CTGCCTCTGTCTCCTGGGTGGGACTGTTCTGTCCTTGCACTGCTGTTCTGTGTTACCTCTTGGGGTGTAAGGTTT TTCAAAGGGAGCAGCAAGGGAGGCTTGTTCTACTCACCTGGGCCTGTTTGCCTGAGAAGGGGAGATAAGGGCTGA GCAGGGCTGGTTGCCGTCCTTGCAACTGTGTCTTATTTGCCTGTGCCGTTATATCTTGGTGACCCCTCCACGTGT CATGGCATCTCCAAGATGGGGCACTGCTGTGTGCAGAATCCAGGGTCCTCTTTCTGCTTGCAACTCCTTTCCCTG GATGCCCCAGAAACAATCCAGGCCTCCTTTCCTATCTTACCCCTTTGCTTTGCTTTTACCCCAGCACCTCTATA ACCGCCTTCTCTTTTCAGAACTCCTTGTTTCTCATCCTGTTTTTTATGATTACAAAACTCTTGCTTCCACCC TGGAAGATAACTGCTATAGATGCCTGTATGTAAATGGTGCTGTCTCCAGCAACTGGCATGCTGAAGAAGAATTGA TTCACGGGGTATAAATGTTGGGGATTGGAAGTGGGGATGAAATGGCACTTGTTGATACAGGAGCAGAGAGGTGAG GCCGACTGCTGAAGACAGCTCGCCACCCTCCTTGCCTCCACTCCAATCCAGGGGCTGGGGCCACATTCTTTGCCT TCATTTATCCTCAGATCAGGTGAGATCGACAGGAGGTGTTGATGGCAGTGCCAGCAATTATTGCTAATCCGTTTG CATCCTTATGCATAGATCTGAATTCAGACTTTGTGAATTTCCAGAGGTGTGGGTAATATAATAGAATTCAGTGAG TGGGCATGGCTGATCTTGTGCAAATTAAAAGTTATGGGGCATAAGAATAGCAAAAGTTGAACTTCTTTTAAAAAG GAAAGTACCCTGAGAGCCAGTATTGGTTGAGGCTCTTCAGTATGCCCAGGTTGGCAGCACTGAGAACCGCAGGAA CCAAGGACCCTTAATGCCAGGGCTAACCTCTCCATGTGCAGTGAGACCTCTGGAGGAAGTGTCATCCTCTGGCTT TGTGTGGTACTCATTATGGTGCAGTGCGGGCATGAAATGAAGACACCCAAATAGGCTTACAGATACGATATGTTT TAAATGTTCGTATTTAACAAAAACATACTGACACTGTTTGGAAATGGCAACAGGAAGATAGCAAAATGAATACTA

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ACATTACGAAAAGATGAACAGGTACATGTTCCAAGGCAGGTGGCTGTGAACTTCCTCTGAGTGAAGGCATCCCCT AATTTTTTTTAAAAGTCCTCAGTAATCTTACCAGTAACAATTGTTATGGGCACATTTGCTTTTGGAAGATTTCTT TTGTATGCATGGGATAAGTACATTTTTAAACAAAAATGGGATTATGCCATAAATTCTATTTTGTGACTTTAATAT ATAGTGAACACCTTTTTTAATGATGACAGGATGTTCCCTTGCATGGCTGTATCAATTTAAACAATCTTGTTTCAA TGGGCATACAGGGTATTTTCTAGTTTTTTTTCCTCTTAGAAAATAATACTTGCGATGACTTTCCTTGTAGCTCA GGCAAACCTGATGCCTTCCCCCTCTTCCTCAGAACCGGCTTTATCACATTGAAAACCTTTGCTCCTCCGACGGATC GAGTCTGCTTTCCCTGTGGATGTGAGCATTGCTTTGTCTGCTGGTGACTGAACATCTCTACCATGTGTCAATTGG TCTATTGATTGTTTTGCAAAAGCCATTTACATCTTAAGGATATTGATAATCTTTTGTTATATTTGATGCAAATAT TTTTTTCCAGTTTATAGGTTGCCTTTTAATTTTGTGTTTCAGGTAGATAAAAGTTAAACGATTTTCTTAGGTTAG TTTATCACTGTGGTTTCTGAACTTGTTATGTGTAGATCTTTTCCACCCCAAGAGTACATAAATATTAATCCATAC GTTTGTGTGAGGGGGCATGGTGCTCTCAGAACCCACCTCCTGTGGCCAGAGAGCCCTGTCCTGTGAGGGTGGT TATCACAGTGGCAGGGTTCAATTCAGAAGACCTTGAGGGCAGGCTGATGTTTCCTGAATGGGCCCCTGGTTGTTG CTTGTCCCTGACTCTCCATTTCCCCATCTGAGTGGATTTGGACCTAATAGGGCACTGGAGCTGGTTCGAATCCTG TTCCCCGCCTCCCCTGGTGCCTAGCGTCAGCCACTTCCTCCTGGGCCCCTCTCCCTTTTCTGTGGCTGG ACTTAATTTTGTTTCCAGTAGTATTTCCCTGTACCGGCAGAGTTCACAAACACATTTGAAGAGGCTTTTTCTCAG GATTCTTAACCTTCCCAAAGGAAGTCCCATGGATGGGTTTCTAGAAGTCTATAAATGCTCTGAAATTGTATTTTT $\tt CTGTGGAAAGCATAACTTCATCTGCTTGTTCGTGCTCAAAAAAAGATCA\underline{TGA}{A}{TGAATGATTGCATGATTTTATG}$ ${\tt CCATTGTGCTTATACTAAAGGATATGTAGCCCATCTCTTGAGCTGTTAAACTGTTTTGACTACTTTAAATCGTGC}$ AGCTGTGAGCATCTCTGTAAATTTAGTGTACACATGTATCCCCTGGAGTGGCATTGCCTCGGCAGTGAGCACTTA TGGTTTTATAACTCTCTCACAGACTCAAATGACTCCAGAAAGCTACACTTCCTGTTGTGAGTATATGATATCCA GAAATACATATAATAGAAGTTGACTATCTGAATCATTTTTAAGTATACATTCAGTAGTGTTAAGTATGTCGCCAT CCATTCCCTCCAGCCTCAGCAACCCCATTCTACTTTCTGTTTCTGTGAGTTTGACTATTCCAAGCACTTCATATC AGTTAAATCATGAAGTATTTGTCTGTCTGTGACTGGCTTATTTCTCTGAGCACAGTGTCCTCGAGATGCGTCTAT GTTGTAGCATATGTCAGAATTTCCTTCCTTTTTAAAAGATCCAAATAATATTCTTATTTTATATCTTTTTTTAT CCATTCATCCATTAGTGGACACTTGGGTTGCTTTTGGCTATTGTAAATAATGGTGCTATGTACAAATATCTATAT TATTGTATTTACAAGTATAATGCTGTAATGTACACACATCTTTTTGAGATCCTACCTTCAGTTCTTTTGAGTATA TAGCCAGAAGTGGTATTACTAAATCTTACGATATTTCTATTTTTAATTTATTGAGGAACCACTGTAGTTTTTCAT AGCAACTGCACCATTTTACGTTCTCACCAAGAGTGCACAAGGGTTCCGAGGTTCCCACATCCTCCCCAACACTTG TTTCCCTAATGAGGAGTGATGCTGAGCATCTTTTCATATGCTTACTGGTCATTTGTATGTTGTCTTTGGAAAAAT GTCTATTCAAGTCCTTTGACTATTTTAAAAATTGGGTTATTAGAGTTATCGTTGTTGTTGACTTGTAGGAGTTTC TTTCTATATTCTGGATATTAATCCCCTATCAGATATATGATTTGCAAATATCTTCTCTTATTCCATAAGGTTACT TTTTCACTTTGTTGATTGTTCTTTGATGTATAGAAGTTTTTAGTTTTGAAATAGTCTAATTTATCTGTTTTTA CTTTTGTGGTCTGTGCTTTTGGTGTCATATCCAAGAAATCCTTGCCAAATCCAACGTTATAAGGTACTTTTAAGG GGTTCCATATCTTTGCAATTCTGAATTGTGCTGTGATCAGGTGTCTTTTTAGTATAATGATTTACTCTCCTTTGG GTAGATACCCAGTAGTGGGATTGCTGGATCGAATGGTTTTTATAATTTTCTATTTTACCACAGTTTCTCTCTGCA

3568/6881 FIGURE 3291C

TTTTTCCTCTTTGACCACTAACCATGTGAAATTCTCATATTGACCTTTATAATGATCATGAACTCTTAGTATCAT TGGGAAGGCCACATTTGCCACTTATGATTGTAAACCTTATCCTCCATTTTTCCTGTTATTGTTGGTGCAAAAAGC ACCTATTATACCAGGACTTTAAAAATCAGTCTGATAAGTCTTTGATAAGTCTAATAATAATAACTGATAAGTCCA CTCCATTTAAATTAATTATTTACATTGATGAAATAGCAAAATGTTAATGACTAAATACTGTCTTGGTTTTTTCGT TTTTAATTTCAATGGCTTTTGGGGTACAAATGGCTTTTGGTCATATAGATGAATTCTACAGTAGTGAAGTCTGAG ATTTTACTGCACCGGTCACCTGAGTAGTGTACATTGTACCCAATATGTGGTTTTTTATACCTTGCCCCCCTCTTA CCCTCCCCACTTTGAGTCTCTAGTGTCCATTATGTCACTCTGTATACCTTTTTGTACCCATAAGTTAGCTCTCAC TTATAAGTGAGAACACAGTATTTGGTTTTCCATTCCTGAGTTGCTTCACTTAGAATAATATCCTCCAGCTCCA TACTGCCATCAAGTGTCTTTCTGGTATAATGACTTCTTTTCCTTTGGGTAGATACCCAGGAGTGGGATTGCTAGA TCAAATGGTTCTTAACATTTTCTCTCTGGATCTATTTCTGGAAATTTTAGGCTCCAGTTTTTGTTGTTGTTA ATAAAATGCAATGGAATGTAATGATCATCACTTTTCATTATGCTTTAAAATCTGGTAAATGGAGGCTAGAACACT CCTGTAAGGCAAGAATATTCTCTCTGTTGGAACTCAAATACACAGAACTGGGTAAATCTCAATCTTAATCTTTGA TTCAGGACACATGGCTCTCTTTTACTTGCTTTCTTTAATTGTTTTTTAATAATGTGGTAAGCATTTCTGAAT CTCCTATCCAATACAAAAACTAGGACAATACAGACAGTAACTCCTATGGTTACAATGAACACTCCTCTCCACTTA AATTAATTATTTACACTGATGAAATTGAAATAGCAAAATTTTAATGACTAAATACTGTCTTTGATTTTTTGTTCC ATTTTACTACACCTTCCACTTATGTGGTCCCACACCACCCCCCCTGCCGCCTCCTGCCACCCCCTAGGCCA TCTAAATGTGTTTTTCAGAGTATATATTTATATTTTAGCTGTTCTTAGAGAAAATTTATTATTTTTGCATGTAATC CAGCCTCTCAACAACACTGTTTCTCAGTGTCCTTGTAGAAGTGATATGTGGGTGTTTTCTCCTTACACAGAGTTG AAAGGTGACGACAACGTTGGCACTACCAATCCCCCACCCTCCAGAGGGGTAACCAGTGTTACCAGTTTGCTG TGTTTCCTGCTACACCTCGCCTTATTCACTTCCATTTGTATCTGAAAAACGTGTTGCATGGTTTCTTTTCTATAG AAGTGGTAAAATGCTATTGTGTCCTGTACATTATTGATTACTTTTTTTCATTTAACAGTAGGGAGATGCCTGGGA GTACACAGAGAACTGCCCTCATTGTTTTCAACTTCTGCACTGTATGTCTGTGAGTTTAGCCATTCTGCTGTTAAT GGAAATTTACAGTATTCTAATCTTTTGATATTACAAACAGTTCTGTGCGATCATCGTCATACACAACCCCTTGTG CACAATGCATGAGTGTTTCTCAGGGTAGGTACCAAGAAGTGAAATTCCTGGGTCATAGGGCGTGAGTCCGACATT TTTCTCCATTCTGCCCTGTTGCCCTCCAGAGTGGGTGTCCAGCTTTGCATACCTAAGTATGAGAGTATCTGTTGT TCATATCCTCTACGACGCTCCATATATGAAACTTAAGTTTCTGCTAGTTGCCATCTTTGATCTATCATGTATGCA GTGACCTACTAAGACTGTAATTGGTACAGTAGATTCTTGTCATCTGTGTGTAATTTAGCATTCATGGGCTTAAT GCTGACAAGGCCCCCAGGGTCCAAGACATATAATCATGTATAATTTTGTCAAGGTATAATTTTTTAAATTGCTTT TGTCATGTGTCTGCTGGTGATGCCCAACCCAGTGCTCTGCACCCAGGTCACACTGTGGCTTTGTCCTCTGCTTAT GCCTGCATTGCAGCAACTGTCCTGAAGAGACCAAAATTATGCAGATTTAGGTAAGTCCATGGCTAATGTTATTAT ATTATGTGCTATTGTAATGGATGGGGCTGTGGAGTGTATGAATTTATAAATCACTGGTCTTGTAATTAAAATCA AACACTATAGAAAAAGGCCATGTAGAAGATAAAAGTTCCTCTATAATCCCGGACCCCTAAGATAACTACTAATGA CAACTTCATTTATATTCCTTCAGACATTTTCTGGCTGTGGATGTACTAAAATGTATCCTATTATTCTCTGCCCTA AAATGGAATCATACAAGGTGTACTGTTATTTTTATGGCTCTATAACATGTCATATTGTACGTGTTGGTATGGTCA TTTTAACCATTTTCTAGTGATGGCTTTGAGGTTATTTGCAGTTTCCTAGCCATCTCAAAGTGTGCTGCGGGGAT CTCTTTTGCATCCCTCTGGGTGCAGAGCTGAGGCACCCAGAGGCAGTGTCCAGAGGAGGCAGCATCTGTAGGTGT CTTCACCTGCTCTGGCTCTTGGCACATCTGGTTGGTGACACTGTTTTGTGAGATGGGTTGAAAGCACGTGCTGCC AAAATAGAATAATGTTGGTCCTCCTCATGTGCCGTGGAACTGGGGTAAAACTGCGTAGTGGCTGCAGCTGCCT GTCCATACCGGAATCGAGTATAACACGGTGCCTGGCTTAGCACAAAACAGTAGTGGGTCCTGCAGGCCCCAGAGT

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3569/6881 FIGURE 3291D

ATTTGTAAAAAGTGGTATTTAATGATCTTTTATTCACTTGTCTGTTTAGTTTGTAAAATCTTAAGTGGCATCCT GGTCTGGGAAGGAGTGCTGTCTGCGCCTGCCCTCCGCTGGGCACAGCGTGGCTGCTTCAGGGGGCTAAGCACAC TTACTACCTCTAGAAGGAAATACCTGAGTTCCTCTGGCCTCAGCTCCTAGAGTGACTGGTGTGCTGTCCCTGTTA TGTTCAAAGCCATACCTGCACATGTTTGAACTTCAAACCCTGTGGGTGATTCAGTGGCATCTTTCTCTAACCCCC AGCTGTACAGGCGTGGGTACACCACACAGCCTGTCTTGCACTGTGGACTGTTGAGTTACTAGTACATCTAGGTAA GCACCGCATATCTGTATTCATGTCTGCCTTGGTCTTTTCAACATCTGTGTGGTAGCCGTGTTTGAATTACCCATT CCCTTTTTGGGGAACCATTAAGTTGTTTCAGCAATTTTTACTGTAGATAAGGCTATACCGCATATCTGTGTACAT GGGTTTTTATGTACATGGGCAAGTATATCTGTGAGAGAAAAGTTTCCTCAGGAGGAATTCTGGGCACAGCATGTG TAAATTTCTAAATATGATGGACACCCCCAGCTTCCACCTCAAGGAGGTTGGTCCCATTGACATTTCCCCACACCT TCACCCAGGCTGTGCCCTTAAACTTGGTTATTTGTCAATGTGAGAAGTGGAAAATAGTATTTAATTGTAGTTTGG ATTTGTATTCTATTGGGTTGTATACTTACTGATTAATAATAAGAGCTCTTTACATATTAAGGAAATTAACCCTT

 ${\tt MFGSSYSLLSSHSELSCLCPPSPPPLVPSVRSSHFLLGPSPFSVAGCLPAWRWTFHVTGISMYILVWSVSTLNFVSSSISLYRQSSQTHLKRLFLRILNLPKGSPMDGFLEVYKCSEIVFFCGKHNFHLLVRAQKRS}$

AGCCCCCCATCCCGGCCCTCTCCCGCCCTTGTCCCCGCCCCTTCCCGCCCCAACTCAGGTTCTGCCCC ACCCGCCCAATTCACGTCCTGCTCCGCCCGACGTAGGCCCCGCCCTGGCCCCCGGGCCCCGCCCCGTCTGA CGGCGGCGGTGGGGACGATGTGGTTCTTTGCCCGGGACCCGGTCCGGGACTTTCCGTTCGAGCTCATCCCGGAGC CCCCAGAGGGCGGCCTGCCCGGGCCCTGCACCGCGCCGCAAGAAGGCCACAGGCAGCCCGTGTCCA TCTTCGTCTATGATGTGAAGCCTGGCGCGGAAGAGCAGACCCAGGTGGCCAAAGCTGCCTTCAAAAA CTCTACGGCACCCCAACATCCTGGCTTACATCGATGGACTGGAGACAGAAAAATGCCTCCACGTCGTGACAGAGG CTGTGACCCCGTTGGGAATATACCTCAAGGCGAGAGTGGAGGCTGGTGGCCTGAAGGAGCTGGAGATCTCCTGGG GGCTACACCAGATCGTGAAAGCCCTCAGCTTCCTGGTCAACGACTGCAGCCTCATCCACAACAATGTCTGCATGG $\tt CCGCCGTGTTCGTGGACCGAGCTGGCGAGTGGAAGCTTGGGGGCCTGGACTACATGTATTCGGCCCAGGGCAACG$ GTGGGGGACCTCCCCGCAAGGGGATCCCCGAGCTTGAGCAGTATGACCCCCCGGAGTTGGCTGACAGCAGTGGCA GAGTGGTCAGAGAGAGTGGTCAGCAGACATGTGGCGCTTGGGCTGCTCATTTGGGAAGTCTTCAATGGGCCCC TACCTCGGGCAGCCCTACGCAACCCTGGGAAGATCCCCAAAACGCTGGTGCCCCATTACTGTGAGCTGGTGG GAGCAAACCCCAAGGTGCGTCCCAACCCAGCCCGCTTCCTGCAGAACTGCCGGGCACCTGGTGGCTTCATGAGCA AGGAGCTGAGCAAGAGCCTGGACGCATTCCCTGAGGATTTCTGTCGGCACAAGGTGCTGCCCCAGCTGCTGACCG CCTTCGAGTTCGGCAATGCTGGGGCCGTTGTCCTCACGCCCCTCTTCAAGGTGGGCAAGTTCCTGAGCGCTGAGG ${\tt AGTATCAGCAGAAGATCATCCCTGTGGTGGTCAAGATGTTCTCATCCACTGACCGGGCCATGCGCATCCGCCTCC}$ TGCAGCAGATGGAGCAGTTCATCCAGTACCTTGACGAGCCAACAGTCAACACCCAGATCTTCCCCCACGTCGTAC ATGGCTTCCTGGACACCAACCCTGCCATCCGGGAGCAGACGGTCAAGTCCATGCTGCTCCTGGCCCCAAAGCTGA ACGAGGCCAACCTCAATGTGGAGCTGATGAAGCACTTTGCACGGCTACAGGCCAAGGATGAACAGGGCCCCATCC GCTGCAACACCACAGTCTGCCTGGGCAAAATCGGCTCCTACCTCAGTGCTAGCACCAGACACAGGGTCCTTACCT CTGCCTTCAGCCGAGCCACTAGGGACCCGTTTGCACCGTCCCGGGTTGCGGGTGTCCTGGGCTTTGCTGCCACCC AATCCGTGCGAGACCAGGCCTTCAAGGCCATTCGGAGCTTCCTGTCCAAATTGGAGTCTGTGTCGGAGGACCCGA CAGGCTGGGCCGTGACCGGGGTCTCCTCACTCACCTCCAAGCTGATCCGTTCGCACCCAACCACTGCCCCAACAG ACAGCAGCACTGCTGACAGATGGGACGAGACGAGACTGGGGCAGCCTGGAGCAGGAGGCCGAGTCTGTGCTGCCCC AGCAGGACGACTGGAGCACCGGGGGCCAAGTGAGCCGTGCTAGTCAGGTCAGCAACTCCGACCACAAATCCTCCA AATCCCCAGAGTCCGACTGGAGCAGCTGGGAAGCTGAGGGCTCCTGGGAACAGGGCTGGCAGGAGCCAAGCTCCC AGGAGCCACCTCCTGACGGTACACGGCTGGCCAGCGAGTATAACTGGGGTGGCCCAGAGTCCAGCGACAAGGGCG ACCCCTTCGCTACCCTGTCTGCACGTCCCAGCACCCAGCCGAGGCCAGACTCTTGGGGTGAGGACAACTGGGAGG GCCTCGAGACTGACAGTCGACAGGTCAAGGCTGAGCTGGCCCGGAAGAAGCGCGAGGAGCGGCGGCGGGAGATGG AGGCCAAACGCGCCGAGAGGAAGGTGGCCAAGGGCCCCATGAAGCTGGAGCCCGGAAGCTGGACTGAACCGTGG CCAGCCAGGCCATCTCACGTGTACATAATCAGAGCCACAATAAATTCTATTTCAC

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WO 2004/030615 PCT/US2003/028547

3573/6881 FIGURE 3295

CTCCCAAAGCAGAATTGCAGCTGCCGCCGCCGCCACCTCCAGGCCACTATGGCGCCTGGGGGCTGCCCAGGAGCTT CAGGCCAAGTTGGCAGAGATCGGAGCTCCGATCCAGGGTAATCGCGAGGAGCTGGTGGAGCGGCTGCAGAGCTAC ACCCGCCAGACTGGCATCGTGCTGAATCGGCCGGTTTTGAGAGGGGGAAGATGGGGACAAAGCCGCTCCACCTCCC ATGTCGGCACAGCTCCCTGGAATTCCCATGCCACCACCACCTTTGGGACTCCCCCCTCTGCAGCCTCCTCCGCCA CTCCGTGTGGGTGAGCCAGTGGCACTGTCAGAGGAGGAGCGGCTGAAGTTGGCTCAGCAGCAGCAGCGCATTGCTG ATGCAGCAGGAGGAGCGTGCCAAGCAGCAGGAGATCATTCGCTGAAGGAACATGAGCTCTTGGAGCAGCAGAAG ACTCCTACAGTTTTGCCCATGGGAGCCCCTGTTCCCCGGCCTCGTGGTCCCCCACCGCCCCCTGGAGATGAGAAC AGAGAGATGGATGACCCCTCTGTGGGCCCCCAAGATCCCCCAGGCTTTGGAGAAGATCCTGCAGCTGAAGGAGAGC GCGTCAGAGACTGAGGAGGACACAGTGTCCGTATCTAAAAAGGAGAAAAACCGGAAGCGTAGGAACCGAAAGAAG AAGAAAAAGCCCCAGCGGGTGCCGAGGGGTGTCCTCTGAGAGCTCTGGGGACCGGGAGAAAGACTCAACCCGGTCC CGTGGCTCTGATTCCCCAGCAGCTGATGTTGAGATTGAGTATGTGACTGAAGAACCTGAAATTTACGAGCCCAAC TTTATCTTCTTTAAGAGGATCTTTGAGGCTTTTAAGCTCACTGATGATGTGAAGAAGGAGAAAGAGAAAGAGCCA GAGAAACTTGACAAACTGGAGAACTCTGCAGCCCCCAAGAAGAAGGGATTTGAAGAGGAGCACAAGGACAGTGAT GATGACAGCAGTGATGACGAGCAGGAAAAGAAGCCAGAAGCCCCCAAGCTGTCCAAGAAGAAGTTGCGCCGAATG AACCGCTTCACTGTGGCTGAACTCAAGCAGCTGGTGGCTCGGCCCGATGTCGTGGAGATGCACGATGTGACAGCG CAGGACCCTAAGCTCTTGGTTCACCTCAAGGCCACTCGGAACTCTGTGCCTGTGCCACGCCACTGGTGTTTTAAG CGCAAATACCTGCAGGGCAAACGGGGCATTGAGAAGCCCCCCTTCGAGCTGCCAGACTTCATCAAACGCACAGGC ATCCAGGAGATGCGAGAGGCCCTGCAGGAGAAGGAAGAACAGAAGACCATGAAGTCAAAAATGCGAGAAAAGTT CGGCCTAAGATGGGCAAAATTGACATCGACTACCAGAAACTGCATGATGCCTTCTTCAAGTGGCAGACCAAGCCA AAGCTGACCATCCATGGGGACCTGTACTATGAGGGGAAGGAGTTCGAGACACGACTGAAGGAGAAGAAGCCAGGA CTGATTGCCATGCAGCGATATGGACCACCCCCATCGTATCCCAACCTGAAAATCCCTGGGCTGAACTCGCCCATC CCTGAGAGCTGTTCCTTTGGGTACCATGCTGGTGGCTGGGCAAACCTCCAGTGGATGAGACTGGGAAACCGCTC TATGGGGACGTGTTTGGAACCAATGCTGCTGAATTTCAGACCAAGACTGAGGAAGAAGAAGATTGATCGGACCCCT TGGGGGGAACTGGAACCATCTGATGAAGAATCCTCAGAAGAAGAGGAAGAAGAGAAGAAGTGATGAAGACAAACCA GATGAGACAGGCTTTATTACCCCTGCAGACAGTGGCCTTATCACTCCTGGAGGCTTTTCATCAGTGCCTGCTGGA ATGGAGACCCCTGAACTCATTGAGCTGAGGAAGAAGAAGATTGAGGAGGCGATGGACGGAAGTGAGACACCTCAG CTCTTCACTGTGTTGCCAGAGAAGAGAACAGCCACTGTTGGAGGGGCCCATGATGGGATCAACCCACATTTATGAC ATGTCCACGGTTATGAGCCGGAAGGGCCCGGCTCCTGAGCTGCAAGGTGTGGAAGTGGCGCTGGCGCCTGAAGAG TTGGAGCTGGATCCTATGGCCATGACCCAGAAGTATGAGGAGCATGTGCGGGAGCAGCAGGCTCAAGTAGAAGAAG AGCCGTGGGGGCAGCAAGAATATAAGGAGTTCAAGTTT<u>TAG</u>GTCCCCTCACACTAGCCCTTTTTTTGGCCCTAC GTCTGGATGCCTGGGCTTCACACAAGAACCACCTCTCCCGCAGTTCCCAAGGACTTGTCATTTCATGTTCTTATT

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VVEMHDVTAQDPKLLVHLKATRNSVPVPRHWCFKRKYLQGKRGIEKPPFELPDFIKRTGIQEMREALQEKEEQKT
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AMDGSETPQLFTVLPEKRTATVGGAMMGSTHIYDMSTVMSRKGPAPELQGVEVALAPEELELDPMAMTQKYEEHV
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HESCGQCTPCREGVDWMNKVMARFVRGDARPAEIDSLWEISKQIEGHTICALGDGAAWPVQGLIRHFRPELEERM
ORFAQQHQARQAAS

GGCACGAGGGCGCGAAGGCACCGGTGGCAGCGGCGACGGCAGCTGCGACAGCAACCCCTGCTGGGCCGAAACTG GGCAGAGCGGAGCAGACGTCTGAAGCAGCGCGAGTGAGGCGCGAGGGTAGCGCCCGCGCCCCGGGAAGACCCCTCG GGGCGAACCGGCAGCCCAGCCCGGGTCCCGGTTCCCAAGGCCCCGCCTCTAGGGCCTGGGGACTAATCGGATTG TGCGAGGTCCGGAAGGCGGAGGCCAATCGGCGGCGGTTGCGACCTGCTGGGGCAGGTCTCGGCCAATAAGGAGGC TCGAGTGACATCTTCGCGCACCAATCGGGAGTGAGGGAGCATTCGTGCCCGCTCGCCCTTCCGGCCAGACCTCTA TTTACCAGGGGCGTGCAGCCGCTTGCCAATCAGAGCGCGGCTGAGCGCACCCAACCCCGAGGAGCGG $\tt CCGGCTGGCGTCCGCCGCCCAGGAGTTGGGGATGTCCTACAAACCCATCGCCCCTGCTCCCAGCAGCACCCCT$ GGCTCCAGCACCCCTGGGCCGGGCACCCCGGTCCCTACAGGAAGCGTCCCGTCGCCGTCGGGCTCAGTGCCAGGA GCCGGCGCTCCTTTCAGACCGCTGTTTAACGACTTTGGACCGCCTTCCATGGGCTACGTGCAGGCGATGAAGCCA ${\tt GAGTGCCTGGCAGAGACAGAGCGGAACGCCCGCACG} {\color{red}{\textbf{TAA}}} {\tt CAGGAAGCGCCTCGGCCTCAGCGTCTGGACCTATCC}$ GGCCACTGCAGAGCACCCGCTTCTCCCTGGCCTTCATCCCGAGTTGCACTAACCATCCTGGGCTTCCTGTCCTGT GTCCCTTGGTGGGTCCCCTCCAGGAACCAAGGAGTGGCCCTCCAGGTGGCAGCACTAAGGACACCCCCCACAAC AAGAGTTAGCAGCGAGGTCCCCATGAGTCCCACCCATGACCTGCCGACAGTGTTGCCCACCGGAACTTTTGTGGC $\tt CCCTACCGCTCAGCCCTTCCCAGCACTTCTCCCACTTTGTCCCGAGCCTCCTTCTCCCCCAGCAGGGGCACAGGC$ $\tt CTGGCACCTCCCTGCCTTGTGTCCTGAGCCATAGTGACTCTTTTATCTGTGTGTCTTTTGCTAAATATGCCCTTT$

WO 2004/030615 PCT/US2003/028547

3580/6881 FIGURE 3302

 ${\tt MSYKPIAPAPSSTPGSSTPGPGTPVPTGSVPSPSGSVPGAGAPFRPLFNDFGPPSMGYVQAMKPPGAQGSQSTYTDLLSVIEEMGKEIRPTYAGSKSAMERLKRGIIHARALVRECLAETERNART}$

3581/6881 FIGURE 3303A

 $\tt CGCGGCGGGGGGGTGCTAGGCTCGCCTCTGCTCGTGGCGGGCCCGGACATGGGGTCCCGTGGCCTGAGTCC$ GAGCGGAGGCCGCCGCCGCCGAGCGCCTTCAGGATGCTCATCAAGGAATACCACATTCTGCTGCCCATGAGCC TGGACGAGTACCAGGTGGCCCAGCTCTACATGATCCAGAAAAAGAGCCGGGAGGAGTCTAGTGGTGAGGGCAGCG ACGTGGGCTCCCACATCCCAGGCTGGTTCCGGCACTGCTGCCCAAGGCTGCCCTGCAGGTAGAAGAGAATCCTG GAATGCCTACCCCTACACCCGAACCCGGTACACCTGCCCTTTCGTGGAGAAATTCTCCATTGAAATTGAGACCTA CACCATCGACATCGTGCGGGATGCAGTGGCCCCAGGCGAGTACAAAGCAGAAGAGGACCCCCGGCTTTATCACTC CTATAAGCTGTGCAAGGTTGAGTTCCGCTACTGGGGCATGCAAGCCAAGATCGAGCAGTTCATCCATGATGTAGG TACTGCGTCGGGTGATGCTGCGGCCCACCGCCAGGCCTGGTGCTGGCAGGATGAGTGGACAGAGCTGAGCATGGC TGACATCCGGGCACTGGAAGAGGAGACTGCTCGCATGCTGGCCCAGCGCATGGCCAAGTGCAACACAGGCAGTGA GGGTCCGAGCCCAGCCCCCGGGAAACCGAGCACCGAGGCCCGGTCTGCGGCAGCAACACTGGCACCCCCGATGG GCCTGAGCCCCCAGGCCCAGATGCCTCCCCGATGCCAGCTTTGGGAAGCAGTGGTCCTCATCCTCCCGTTCC TCCTACTCATCCCAACATGGAGGGGCTGTGTCTCCCCAGAGCTTGTCTGAGTGGCGCATGCAGAACATTGCCCGA GACTCTGAGAACAGCTCCGAGGAAGAGTTCTTTGATGCCCACGAAGGCTTCTCGGACAGTGAGGAGGTCTTCCCC AAGGAGATGACCAAGTGGAACTCCAATGACTTCATTGATGCCTTTGCCTCCCCAGTGGAGGCAGAGGGAACGCCA GCCGGGGAGCTGGGGGCTGAGGCATGCGCAGTCCACGCCCTCTTCCTTATCCTGCACAGCGGCAACATCCTGGAC TCAGGCCCTGGAGACGCCAACTCCAAGCAGGCGGATGTGCAGACGCTGAGCTCCGCCTTCGAGGCCGTCACCCGC ATCCACTTCCCTGAGGCCTTGGGCCACGTGGCGCTGCGACTGGTGCCCTGTCCACCCATCTGCGCCGCCCTAT GCCCTTGTCTCCAACCTGAGCCCTTACAGCCACGATGGGGACAGCCTGTCTCGCTCCCAAGACCACATTCCACTG GCTGCCCTGCCACTGCTGCCACCTCATCCTCCCGCTACCAGGGCGCCGTGGCCACCGTCATTGCCCGCACCAAC CAGGCCTACTCAGCCTTCCTGCGCTCACCTGAGGGTGCCGGCTTCTGTGGGCAGGTCGCACTGATTGGAGATGGT GTTGGTGCCATCCTGGGCTTTGATGCACTCTGCCACAGTGCTAACGCGGGCACCGGGAGTCGGGGCAGCAGCCGC CGTGGGAGCATGAACAATGAGCTGCTCTCTCCGGAGTTTGGCCCAGTGCGGGACCCCCTGGCAGATGGTGTGGAA GGCCTGGGTCGGGCAGCCCAGAACCCTCGGCCTTGCCTCCCAGCGCATCCCCAGCGACATGGCCAGTCCTGAG CCCGAGGGCTCTCAGAACAGCCTTCAGGCAGCCCCCGCAACCACCTCCTCCTGGGAGCCCCGGCGGGCAAGCACCA GCCTTCTGCCCACCCGCTGCCAGTTCCGAGGCACCTGACGCCCCAGCAGCACTGCCCGCCTTGACTTCAAGGTC GCAGCCCAGATGCGCCCAGCCTGTGAACAGATCTACAACCTCTTCCACGCGGCTGACCCCTGCGCCTCACGCCTC GAGCCCTGCTGGCCCGAAGTTCCAGGCCATCGCCCCACTGACCGTGCCCCGCTACCAGAAGTTCCCCCTGGGA GATGGCTCATCCCTGCTGCCGACACTCTGCAGACGCACTCCAGCCTCTTTCTGGAGGAGCTGGAGATGCTG GTGCCCTCAACACCCACCTCTACTAGCGGTGCCTTCTGGAAGGGCAGTGAGTTGGCCACTGACCCCCCGGCCCAG CCAGCCGCCCCAGCACCACCAGTGAGGTGGTTAAGATCCTGGAGCGCTGGTGGGGGGACCAAGCGGATCGACTAC TCGCTGTACTGCCCCGAGGCGCTCACCGCCTTTCCCACCGTCACGCTGCCCCACCTCTTCCACGCCAGCTACTGG GAGTCCGCCGACGTGGTGGCGTTCATCCTGCGCCAGGTGATCGAGAAGGAGCAGGCCACAGCTGGCGGAATGCGA AGAACTGAACATCGTGGCCGGTTATGGGTCTCCCAAAGATGTGGCTGTATACGCGGCGCTGGGGCTGTCCCCGAG

3582/6881 FIGURE 3303B

CTCAACGCCTCGGTGAGCGCCTTCCAGAGACGCTTTGTGGTTGATGTTCGGCGCTGTGAGGAGCTGGAGAAGACC CCACCCGGGACCTGCTGCGCATCCAGGAGGAGACGGAGCGCCTGGCCCAGGAGCTGCGGGATGTGCGGGGCAAC CAGCAGGCCCTGCGGGCCCAGCTGCACCAGCTGCAGCTCCACGCCGCCGTGCTACGCCAGGGCCATGAACCTCAG CTGGCAGCCGCCCACACAGATGGGGCCTCAGAGAGGACGCCCCTGCTCCAGGCCCCCGGGGGGGCCGCACCAGGAC ACGTGGATGACCTTCCTCATCTCCTACTGGGGTGAGCAGATCGGACAGAAGATCCGCAAGATCACGGACTGCTTC CACTGCCACGTCTTCCCGTTTCTGCAGCAGGAGGAGGCCCGCCTCGGGGCCCTGCAGCAGCTGCAACAGCAGAGC CAGGAGCTGCAGGAGGTCCTCGGGGAGACAGAGCGGTTCCTGAGCCAGGTGCTAGGCCGGGTGCTGCAGCTGCTG CCGCCAGGGCAGGTGCAGGTCCACAAGATGAAGGCCGTGTACCTGGCCCTGAACCAGTGCAGCGTGAGCACCACG CACAAGTGCCTCATTGCCGAGGCCTGGTGCTCTGTGCGAGACCTGCCGGCCCTGCAGGAGGCCCTGCGGGACAGC TCGATGGAGGAGGGAGTGACTGCCGTGGCTCACCGCATCCCCTGCCGGGACATGCCCCCCACACTCATCCGCACC AACCGCTTCACGGCCAGCTTCCAGGGCATCGTGGATGCCTACGGCGTGGGCCGCTACCAGGAGGTCAACCCCGCT TTCTTCAGGGGCCGCTACCTGCTTCTTATGGGCCTGTTCTCCATCTACACCGGCTTCATCTACAACGAGTGC GCATTCCTGGCCCAGCACACGATGCTTACCCTGGATCCCAACGTCACCGGTGTCTTCCTGGGACCCTACCCCTTT GGCATCGATCCTATTTGGAGCCTGGCTGCCAACCACTTGAGCTTCCTCAACTCCTTCAAGATGAAGATGTCCGTC ATCCTGGGCGTCGTGCACATGGCCTTTGGGGTGGTCCTCGGAGTCTTCAACCACGTGCACTTTGGCCAGAGGCAC CGGCTGCTGCTGGAGACGCTGCCGGAGCTCACCTTCCTGCTGGGACTCTTCGGTTACCTCGTGTTCCTAGTCATC TACAAGTGGCTGTGTGTCTGGGCTGCCAGGGCCGCCTCGGCCCCCAGCATCCTCATCCACTTCATCAACATGTTC CTCTTCTCCCACAGCCCAGCAACAGGCTGCTCTACCCCCGGCAGGAGGTGGTCCAGGCCACGCTGGTGGTCCTG GCCTTGGCCATGGTGCCCATCCTGCTGCTTGGCACACCCCTGCACCTGCTGCACCGCCACCGCCGCCGCCTGCGG AGCTCCGATGAGGAAAAGGCAGGGGCCTGGATGATGAAGAGGAGGCCGAGCTCGTCCCCTCCGAGGTGCTCATG CACCAGGCCATCCACACCATCGAGTTCTGCCTGGGCTGCGTCTCCAACACCGCCTCCTACCTGCGCCTGTGGGCC CTGAGCCTGGCCCACGCCCAGCTGTCCGAGGTTCTGTGGGCCATGGTGATGCGCATAGGCCTGGGCCTGGGCCGG GAGGTGGGCGTGGCGGTGTGGTGCTCGTCCCATCTTTGCCGCCTTTGCCGTGATGACCGTGGCTATCCTGCTG GTGATGGAGGGACTCTCAGCCTTCCTGCACGCCCTGCGGCTGCACTGGGTGGAATTCCAGAACAAGTTCTACTCA

MGSMFRSEEVALVQLFLPTAAAYTCVSRLGELGLVEFRDLNASVSAFQRRFVVDVRRCEELEKTFTFLQEEVRRA
GLVLPPPKGRLPAPPPRDLLRIQEETERLAQELRDVRGNQQALRAQLHQLQLHAAVLRQGHEPQLAAAHTDGASE
RTPLLQAPGGPHQDLRVNFVAGAVEPHKAPALERLLWRACRGFLIASFRELEQPLEHPVTGEPATWMTFLISYWG
EQIGQKIRKITDCFHCHVFPFLQQEEARLGALQQLQQQSQELQEVLGETERFLSQVLGRVLQLLPPGQVQVHKMK
AVYLALNQCSVSTTHKCLIAEAWCSVRDLPALQEALRDSSMEEGVSAVAHRIPCRDMPPTLIRTNRFTASFQGIV
DAYGVGRYQEVNPAPYTIITFPFLFAVMFGDVGHGLLMFLFALAMVLAENRPAVKAAQNEIWQTFFRGRYLLLLM
GLFSIYTGFIYNECFSRATSIFPSGWSVAAMANQSGWSDAFLAQHTMLTLDPNVTGVFLGPYPFGIDPIWSLAAN
HLSFLNSFKMKMSVILGVVHMAFGVVLGVFNHVHFGQRHRLLLETLPELTFLLGLFGYLVFLVIYKWLCVWAARA
ASAPSILIHFINMFLFSHSPSNRLLYPRQEVVQATLVVLALAMVPILLLGTPLHLLHRHRRRLRRRPADRQEENK
AGLLDLPDASVNGWSSDEEKAGGLDDEEEAELVPSEVLMHQAIHTIEFCLGCVSNTASYLRLWALSLAHAQLSEV
LWAMVMRIGLGLGREVGVAAVVLVPIFAAFAVMTVAILLVMEGLSAFLHALRLHWVEFQNKFYSGTGYKLSPFTF

CCTTTCTGGCCAGCCCAGAACCCCTGGCCAGTCGCTGGGCTGGGCCAGGCTGAGCTCCGACTCCTTGTCCAGTGC TCTCCCCAGGCTGGCCCGCCTCCTTCAGGCCCGGAACTTCCCACAGTCCCAAGCCCTAGGCGCTT CTCCTCTTCTGGTCCTGCCCGGGAGGCCTCCTGCCTTCCCCTGTGGGCAGGGCCAGTGTGCCCAATTGCCCGATT GCCCCGTGGCCGCCAGCTTTGTGGCAGGTGCCGTGGAGCCCCACAAGGCCCCTGCCCTAGAGCGCCTGCTCTGGA GGGCCTGCCGCGGCTTCCTCATTGCCAGCTTCAGGGAGCTGGAGCAGCCGCTGGAGCACCCCGTGACGGGCGAGC CAGCCACGTGGATGACCTTCCTCATCTCCTACTGGGGTGAGCAGATCGGACAGAAGATCCGCAAGATCACGGACT GCTTCCACTGCCACGTCTTCCCGTTTCTGCAGCAGGAGGAGGCCCGCCTCGGGGCCCTGCAGCAGCTGCAACAGC AGAGCCAGGAGCTGCAGGAGGTCCTCGGGGAGACAGAGCGGTTCCTGAGCCAGGTGCTAGGCCGGGTGCTGCAGC TGCTGCCGCCAGGGCAGGTGCAGGTCCACAAGATGAAGGCCGTGTACCTGGCCCTGAACCAGTGCAGCGTGAGCA ACAGCTCGATGGAGGAGGGAGTGAGTGCCGTGGCTCACCGCATCCCCTGCCGGGACATGCCCCCACACTCATCC GCACCAACCGCTTCACGGCCAGCTTCCAGGGCATCGTGGATGCCTACGGCGTGGGCCGCTACCAGGAGGTCAACC CCGCTCCCTACACCATCACCCTTCCCCTTCCTGTTTGCTGTGATGTTCGGGGATGTGGGCCACGGGCTGCTCA AGACTTTCTTCAGGGGCCGCTACCTGCTCCTGCTTATGGGCCTGTTCTCCATCTACACCGGCTTCATCTACAACG GTGATGCATTCCTGGCCCAGCACACGATGCTTACCCTGGATCCCAACGTCACCGGTGTCTTCCTGGGACCCTACC CCTTTGGCATCGATCCTATTTGGAGCCTGGCTGCCAACCACTTGAGCTTCCTCAACTCCTTCAAGATGAAGATGT $\tt CCGTCATCCTGGGCGTCGTGCACATGGCCTTTGGGGTGGTCCTCGGAGTCTTCAACCACGTGCACTTTGGCCAGA$ GGCACCGGCTGCTGGAGACGCTGCCGGAGCTCACCTTCCTGCTGGGACTCTTCGGTTACCTCGTGTTCCTAG TCATCTACAAGTGGCTGTGTGTCTGGGCTGCCAGGGCCGCCTCGGCCCCCAGCATCCTCATCCACTTCATCAACA TGTTCCTCTCCCACAGCCCCAGCAACAGCTGCTCTACCCCCGGCAGGAGGTGGTCCAGGCCACGCTGGTGG GCTGGAGCTCCGATGAGGAAAAGGCAGGGGCCTGGATGATGAAGAGGAGGCCGAGCTCGTCCCCTCCGAGGTGC TCATGCACCAGGCCATCCACACCATCGAGTTCTGCCTGGGCTGCGTCTCCAACACCGCCTCCTACCTGCGCCTGT GGGCCCTGAGCCTGGCCCACGCCCAGCTGTCCGAGGTTCTGTGGGCCATGGTGATGCGCATAGGCCTGGGCCTGG GCCGGGAGGTGGCGTGGCGGCTGTGGTGCTGGTCCCCATCTTTGCCGCCTTTGCCGTGATGACCGTGGCTATCC TGCTGGTGATGGAGGGACTCTCAGCCTTCCTGCACGCCCTGCGGCTGCACTGGGTGGAATTCCAGAACAAGTTCT ACTCAGGCACGGGCTACAAGCTGAGTCCCTTCACCTTCGCTGCCACAGATGAC<u>TAG</u>GGCCCACTGCAGGTCCTGC AAAAA

MTFLISYWGEQIGQKIRKITDCFHCHVFPFLQQEEARLGALQQLQQQSQELQEVLGETERFLSQVLGRVLQLLPPGQVQVHKMKAVYLALNQCSVSTTHKCLIAEAWCSVRDLPALQEALRDSSMEEGVSAVAHRIPCRDMPPTLIRTNRFTASFQGIVDAYGVGRYQEVNPAPYTIITFPFLFAVMFGDVGHGLLMFLFALAMVLAENRPAVKAAQNEIWQTFFRGRYLLLLMGLFSIYTGFIYNECFSRATSIFPSGWSVAAMANQSGWSDAFLAQHTMLTLDPNVTGVFLGPYPFGIDPIWSLAANHLSFLNSFKMKMSVILGVVHMAFGVVLGVFNHVHFGQRHRLLLETLPELTFLLGLFGYLVFLVIYKWLCVWAARAASAPSILIHFINMFLFSHSPSNRLLYPRQEVVQATLVVLALAMVPILLLGTPLHLLHRHRRRLRRRPADRQEENKAGLLDLPDASVNGWSSDEEKAGGLDDEEEAELVPSEVLMHQAIHTIEFCLGCVSNTASYLRLWALSLAHAQLSEVLWAMVMRIGLGLGREVGVAAVVLVPIFAAFAVMTVAILLVMEGLSAFLHALRLHWVEFQNKFYSGTGYKLSPFTFAATDD

CGGCCGAGGCTGCGGCCATGCAGCATCTTCCCTGACGGTCACCTTAGGGCGGCTGCGGTCCGCGTGCAGCCACA
GCATCCTGAGACCTTCGGGGCCCGGAGCAGCCTCCCTTTGGTCTGCTTCTCGAAGGTTCAATTCACAGAGCACTT
CATATCTACCAGGATATGTTCCTAAAACATCCCTGAGTTCACCACCTTGGCCAGAAGTTGTTCTGCCAGACCCAG
TTGAGGAGACCAGACACCATGCAGAGGTCGTGAAGAAGGTGAATGAGATGATCGTCACGGGCAGTATGGCAGGC
TCTTTGCCGTGGTGCACCTTTGCCAGCCGCCAGTGGAAGGTGACCTCTGAAGACCTGATCTTAATTGGAAATGAAC
TAGACCTTGCGTGTGGAGAGAGAATTCGACTGGAGAAGGTCCTGCTGGTTGGGGCAGACAACTTCACGCTGCTTG
GCAAGCCACTCCTCGGGTAATTGGCCTGTAAGTGCTGGGCTTTGTCTGGGGCTCCAGGGCTGGACATCATGCAGACAGT
GGTCACAGTGCAATTAGGCCAGAAAAGGATCTTGTTCGAGTAGAAGCCACAGTCATTGAAAAGAACAGAATCATGGC
CAAGAATCATTATGAGATTCAGGAAAAGGAAAAACTTCAAGAAGAAAAAGAATCGTCACGACCCCGCAGACTGTCC
TCCGGATAAACAGCATTGAGATTGCTCCGTGTTTGTTGTGTATACCGAGTTAATACTTACAAAAAGGATAAAAATA
AACTCCTGCTTCCCAAGG

 ${\tt MAASSLTVTLGRLASACSHSILRPSGPGAASLWSASRRFNSQSTSYLPGYVPKTSLSSPPWPEVVLPDPVEETRH}\\ {\tt HAEVVKKVNEMIVTGQYGRLFAVVHFASRQWKVTSEDLILIGNELDLACGERIRLEKVLLVGADNFTLLGKPLLG}\\$

GGCGCAGAAGCGGGACGTCGGCTTCTAGGGGCCCAGGCCGGCGGCGGCGATGGCCTCGGCAGCTGTGGAGAGCTT CGTGACCAAGCAACTGGACCTGCTGGAGCTTGAGAGAGACGCGGAGGTGGAGGAGCGCAGGTCCTGGCAGGAGAA GTACGGACGGCTGCTGGTCACCTTTGAGCCCAGGCGATACGGGTCCGCGGCAGCTCTTCCCAGTAACAGCTTTAC TTCTGGTGATATCGTGGGCCTGTACGATGCTGCTAATGAGGGCAGTCAGCTGGCCACTGGGATCTTGACCCGGGT CACCCAGAAGTCGGTCACGGTGGCCTTTGATGAGTCCCACGATTTCCAGTTGAGCTTGGACCGAGAAATTCCTA CAGACTGTTAAAACTTGCCAATGATGTCACTTACAGGCGACTGAAAAAAGCCCTGATTGCTCTAAAGAAGTATCA TTCTGGCCCAGCCTCCTCACTCATAGAAGTGCTCTTTGGCAGATCTGCTCCCAGTCCTGCCAGTGAAATACACCC TGCCATCATCCATGGACCTCCTGGCACTGGGAAAACCACGACTGTGGTTGAGATCATTCTTCAAGCTGTGAAACA AGGCTTAAAGGTTCTGTGCTGCGCCCCCTCCAACATCGCCGTGGACAATCTGGTGGAGCGCCTGGCTCTGTGTAA GCAGCGGATTCTGCGCCTGGGACACCCTGCCCGCCTCCTGGAGTCCATTCAGCAGCACTCCCTGGATGCGGTTTT GACCCAGGATAAGAGAGAGAAAAGTAATTTTCGAAATGAAATTAAGCTGTTAAGAAAAGAACTGAAGGAGAGGGA CCCCCTGAAGTTGCTGCCCGAGAGCTACTTCGACGTGGTGGTCATTGACGAGTGTGCCCAGGCCCTCGAGGCGAG CTCTCACAAGGCTGCGCTGGCAGGACTGTCACTCAGCCTGATGGAACGCCTGGCTGAGGAGTACGGCGCGAGGGT GGTGCGGACACTGACGGTGCAGTACCGCATGCACCAGGCTATCATGCGCTGGGCCTCAGACACCATGTACCTTGG GCAGCTCACAGCCCACTCTTCCGTGGCAAGGCACCTCCTGAGGGACCTCCCAGGTGTGGCTGCCACAGAAGAGAC GGGTGTGCCCCTGCTCTTGGTGGACACCGCCGGCTGCGGGCTGTTTGAGCTGGAGGAGGAGGACGAACAGTCGAA AGGGAACCCTGGCGAAGTCCGCCTCGTCAGTTTGCACATCCAGGCTCTGGTGGACGCTGGTGTTCCAGCCCGTGA TGAAATCAAGTCTGTCGATGGCTTCCAAGGCCGAGAGAAGGAGGCCGTGATACTGTCCTTCGTCAGATCCAACAG GAAAGGTGAAGTTGGTTTTCTTGCTGAGGACCGGAGGATCAACGTGGCTGTCACCCGTGCCCGACGCCACGTGGC GGTCATCTGTGACTCCCGTACTGTCAACAACCATGCATTTTTGAAGACCCTGGTGGAGTATTTCACACAGCATGG GGAAGTACGCACGGCCTTTGAGTATCTTGACGATATTGTCCCAGAAAACTATTCCCATGAGAACTCCCAGGGTTC CAGCCACGCTGCCACCAAGCCCCAGGGACCTGCTACGTCCACCAGGACCGGAAGCCAGCGGCAGGAGGAGGCCA GGAGGCTGCAGCACCTGCCAGACAGGGCCGGAAGAAGCCGGCTGGGAAGTCTCTGGCCTCTGAAGCTCCATCTCA GCCCAGCCTCAACGGAGGCAGCCCAGAGGGAGTGGAGAGCCAAGATGGCGTGGACCACTTCCGGGCCATGATAGT GGAGTTCATGGCCAGCAAGAAGATGCAGTTGGAGTTTCCTCCTTCCCTCAATTCCCACGACAGGCTGCGGGTCCA CCAAATAGCCGAGGAGCACGGCTGAGGCACGACAGTTCCGGGGAAGGGGAAGAGGGTTCATCACTGTGAGCAA CCCTACCCCTGCGCAGACAGAGCAGCCTCCCAGGGAGCAGCCTGGCCCAGACCAGCCTGATCTGAGGACGCTGCA GAAACTTCCAGAAAAGAAAAAAGAAAAAAGCCAAAGGACATCCGGCCACAGATCTGCCCACGGAGGAGGACTTTGA GGCCCTGGTTTCTGCCGCCGTTAAGGCTGATAACACCTGCGGCTTTGCCAAGTGCACAGCCGGCGTCACAACCCT GGGCCAGTTCTGCCAGCTCTGCAGCCGCCGCTACTGCCTCAGCCACCTGCCCGAGATCCATGGCTGCGGTGA GAGGGCTCGCGCCCATGCCCGGCAGAGAATCAGCCGGGAAGGGGTCCTCTATGCCGGCAGCGGGACCAAGAACGG GACCAGCCGGAGGAAGGAGGGGGACGTGACCGGCCGCATCCTTGCACGCCCCGCGGAGCTCTCTCCATGGTAG CCCAGGGCGCTGGCAGACCATGCTCCGCCTCCACCAGGGCCACAGAGGAGCGGAGGGGCCTATGGGGGAGGAGCG GAGGGCCCTGTTGGGGAAGGTTGGGTTTTTGGACCCCAGGGATAAGCTTTTCCGATGTCACAATGTGGAGGAAAG CACCTGGGGGACAACAGTGCTCGTGCAGGTGGGGCTTGGGAAATGCACGTCCCTTACCCCCTCCCCCAAAC CCACATCCCAGCCTCTGGATCCTGGGGAAGTTCCAGTCC

3590/6881 FIGURE 3311A

CACACGGACTACAGGGGAGTTTTGTTGAAGTTGCAAAGTCCTGGAGCCTCCAGAGGGCTGTCGGCGCAGTAGCAG GAGCGCGGACCCAGCCAGGACCCACAGCCCTCCCCAGCTGCCCAGGAAGAGCCCCAGCC**ATG**GAACACCAGCTCC TGTGCTGCGAAGTGGAAACCATCCGCCGCGCGTACCCCGATGCCAACCTCCTCAACGACCGGGTGCTGCGGGCCA TGCTGAAGGCGGAGAGACCTGCGCCCCTCGGTGTCCTACTTCAAATGTGTGCAGAAGGAGGTCCTGCCGTCCA TGCGGAAGATCGTCGCCACCTGGATGCTGGAGGTCTGCGAGGAACAGAAGTGCGAGGAGGAGGTCTTCCCGCTGG CCATGAACTACCTGGACCGCTTCCTGTCGCTGGAGCCCGTGAAAAAGAGCCGCCTGCAGCTGCTGGGGGCCACTT GCATGTTCGTGGCCTCTAAGATGAAGGAGACCATCCCCCTGACGCCGAGAAGCTGTGCATCTACACCGACAACT CCATCCGGCCCGAGGAGCTGCTGCAAATGGAGCTGCTCCTGGTGAACAAGCTCAAGTGGAACCTGGCCGCAATGA ACGCGCAGACCTTCGTTGCCCTCTGTGCCACAGATGTGAAGTTCATTTCCAATCCGCCCTCCATGGTGGCAGCGG GGAGCGTGGTGGCCGCAGTGCAAGGCCTGAACCTGAGGAGCCCCAACAACTTCCTGTCCTACTACCGCCTCACAC GCTTCCTCTCCAGAGTGATCAAGTGTGACCCAGACTGCCTCCGGGCCTGCCAGGAGCAGATCGAAGCCCTGCTGG ACCCGCAGCGAGGGGGGGCCGGCCCCAGGTGCTCCCCTGACAGTCCCTCCTCTCCGGAGCATTTTGATACCAGA AGGGAAAGCTTCATTCTCCTTGTTGTTGGTTGTTTTTTCCTTTGCTCTTTCCCCCTTCCATCTCTGACTTAAGCA GCGGTGGGGGAGGAGGGTTGTGCTACAGATGATAGAGGATTTTATACCCCAATAATCAACTCGTTTTTATATTAA TGTACTTGTTTCTCTGTTGTAAGAATAGGCATTAACACAAAGGAGGCGTCTCGGGAGAGGATTAGGTTCCATCCT TTACGTGTTTAAAAAAAGCATAAAAACATTTTAAAAACATAGAAAAATTCAGCAAACCATTTTTAAAGTAGAAG AGGGTTTTAGGTAGAAAACATATTCTTGTGCTTTTCCTGATAAAGCACAGCTGTAGTGGGGGTTCTAGGCATCTC TAACCTCTTCACCTTATTCATGGCTGAAGTCACCTCTTGGTTACAGTAGCGTAGCGTGGCCGTGTGCATGTCCTT CGTAGCAGGGTCGGGAAAGGCCACCTGTCCCACTCCTACGATACGCTACTATAAAGAGAAGACGAAATAGTGACA TAATATATTCTATTTTATACTCTTCCTATTTTTGTAGTGACCTGTTTATGAGATGCTGGTTTTCTACCCAACGG CCCTGCAGCCAGCTCACGTCCAGGTTCAACCCACAGCTACTTGGTTTGTGTTCTTCATATTCTAAAACCATT TTCTAATGGAATGGTTTGGGAATATCCATGTACTTGTTTGCAAGCAGGACTTTGAGGCAAGTGTGGGCCACTGTG GTGGCAGTGGAGGTGGGGTGTTTGGGAGGCTGCGTGCCAGTCAAGAAAAAAGGTTTGCATTCTCACATTGCCA GGATGATAAGTTCCTTTCCTTTTCTTTAAAGAAGTTGAAGTTTAGGAATCCTTTGGTGCCAACTGGTGTTTGAAA GTAGGGACCTCAGAGGTTTACCTAGAGAACAGGTGGTTTTTAAGGGTTATCTTAGATGTTTCACACCGGAAGGTT TCTGGAAGAAAAAACCACACAAAGACATTGATTCAGCCTGTTTGGCGTTTCCCAGAGTCATCTGATTGGACAGG CCGAGGGGAAGGGCCGTGCCCACACCGGGGACAGCCCGCAGCTCCATTTTCTTATTGCGCTGCTACCGTTGACT TCCAGGCACGGTTTGGAAATATTCACATCGCTTCTGTGTATCTCTTTCACATTGTTTGCTGCTATTGGAGGATCA GTTTTTTGTTTTACAATGTCATATACTGCCATGTACTAGTTTTAGTTTTCTCTTAGAACATTGTATTACAGATGC CTTTTTTGTAGTTTTTTTTTTTTTTTTTGTGATCAATTTTGACTTAATGTGATTACTGCTCTATTCCAAAAAGGTT CCCCAGAGACCAGGCTGTGTCCCTCTTCTCTCCCTGCGCCTGTGATGCTGGGCACTTCATCTGATCGGGGGCGT AGCATCATAGTAGTTTTTACAGCTGTGTTATTCTTTGCGTGTAGCTATGGAAGTTGCATAATTATTATTATTATT

3591/6881 FIGURE 3311B

MEHQLLCCEVETIRRAYPDANLLNDRVLRAMLKAEETCAPSVSYFKCVQKEVLPSMRKIVATWMLEVCEEQKCEE EVFPLAMNYLDRFLSLEPVKKSRLQLLGATCMFVASKMKETIPLTAEKLCIYTDNSIRPEELLQMELLLVNKLKW NLAAMTPHDFIEHFLSKMPEAEENKQIIRKHAQTFVALCATDVKFISNPPSMVAAGSVVAAVQGLNLRSPNNFLS YYRLTRFLSRVIKCDPDCLRACQEQIEALLESSLRQAQQNMDPKAAEEEEEEEEEVDLACTPTDVRDVDI

CTCTAAAGGTTCGGGGGTGGAATCCTTGGGCCGCTGGGCAAGCGGCGAGACCTGGCCAGGGCCAGCGAGCCGAGG AAGCGCAAGCTGGAGCGCGTGCAGAGCGGCCTAGACCTCTTCTCCATGCTGCTGGAGCAGAACGACCTGGAGCCC GGGCACACCGAGCTCCTGCGCGAGCTGCTCGCCTCCCTGCGGCGCCACGACCTGCTGCGGCGCGCGTCGACGACTTC GAGGCGGGGGGGGGGGGGGGCCGGGGGAAGAAGACCTGTGTGCAGCATTTAACGTCATATGTGATAAT GTGGGGAAAGATTGGAGAAGGCTGGCTCATCAAAGTCTCAGACACCAAGATCGACAGCATCGAGGACAGA TACCCCCGCAACCTGACAGAGCGTGTGCGGGAGTCACTGAGAATCTGGAAGAACACAGAGAGAAGAACGCAACA GTGGCCCACCTGGTGGGGGCTCTCAGGTCCTGCCAGATGAACCTGGTGGCTGACCTGGTACAAGAGGTTCAGCAG GCCCGTGACCTCCAGAACAGGAGTGGGGCCATGTCCCCGATGTCATGGAACTCAGACGCATCTACCTCCGAAGCG $\texttt{TCC}\underline{\textbf{TGA}} \texttt{TGGGCCGCTGCTTTGCGCTGGTGGACCACAGGCATCTACACAGCCTGGACTTTGGTTCTCCCAGGAAG}$ TGCGTTTATTAATGCCTCTCCCGCACCAGGCCGGGCTTGGGCCCTGCACAGATATTTCCATTTCTTCCTCACTAT GACACTGAGCAAGATCTTGTCTCCACTAAATGAGCTCCTGCGGGAGTAGTTGGAAAGTTGGAACCGTGTCCAGCA CAGAAGGAATCTGTGCAGATGAGCAGTCACACTGTTACTCCACAGCGGAGGAGACCAGCTCAGAGGCCCAGGAAT CGGAGCGAAGCAGAGAGGTGGAGAACTGGGATTTGAACCCCCGCCATCCTTCACCAGAGCCCATGCTCAACCACT AGGATTATGGGTCCTGCAATTCTACAGTTTCTTACTGTTTTGTATCAAAATCACTATCTTTCTGATAACAGAATT GCCAAGGCAGCGGATCTCGTATCTTTAAAAAGCAGTCCTCTTATTCCTAAGGTAATCCTATTAAAA

GAAGCCAGGCTGAGTGAGCCACAGACCACCTGCTTCTGAACTCAAGCTGCGTTTATTAATGCCTCTCCCGCACCA
GGCCGGGCTTGGGCCCTGCACAGATATTTCCATTTCTTCCTCACTATGACACTGAGCAAGATCTTGTCTCCACTA
AATGAGCTCCTGCGGGAGTAGTTGGAAAGTTGGAACCGTGTCCAGCACAGAAGGAATCTGTGCAGATGAGCAGTC
ACACTGTTACTCCACAGCGGAGGAGACCAGCTCAGAGGCCCAGGAATCGGAGCGAAGCAGAGAGGTGGAGAACTG
GGATTTGAACCCCCGCCATCCTTCACCAGAGCCCATGCTCAACCACTGTGGCGTTCTGCTGCCCCTGCAGTTGGC
AGAAAGGATGTTTTGTCCCATTTCCTTGGTCCAGCTCTTGGCCCCTGTGTGAGTTGAGTCTCCTCTCTGAGACTG
CTAAGTAGGGGCAGTGATGGTTGCCAGGACGAATTGAGATAATATCTGTGAGGTGCTGATGAGTGATTGACACAC
AGCACTCTCTAAAATCTTCCTTGTGAGGATTATGGGTCCTGCAATTCTACAGTTTCTTACTGTTTTGTATCAAAAT
CACTATCTTTCTGATAACAGAATTGCCAAGGCAGCGGGATCTCGTATCTTTAAAAAAGCAGTCCTCTTATTCCTAA
GGTAATCCTATTAAAAACACAGCTTTACAACTTCCATACTAC

3596/6881 FIGURE 3316A

GTGACTGGGGCGGGGCCCCGGGGCCGCGCGTGGGGCGGCAGGCGGACGCCGGGCCGGGCTGCTTTCGTCG ${\tt CAAG} \underline{\textbf{ATG}} \underline{\textbf{ATGTGCGAGGTGATGCCGACCATCAGCGAAGCCAGAAGGCCCCCCTGGAGGAGGTGGAGGCCATGGTTC}$ $\tt CGGCTCCCCTTCACAGCCAGATGCAGATTCACATTTTGAACAGTTGATGGTCTCCATGCTAGAAGAAAGGGACCG$ CCTTCTTGATACACTGAGAGAGACTCAAGAAACGCTGGCCTTAACCCAGGGGAAGTTACACGAGGTTGGTCATGA AAGAGATTCCTTGCAGAGACAGCTCAACACGGCACTTCCACAGGAGTTCGCAGCACTTACTAAAGAACTCAATGT ATGCAGGGAACAGCTCCTTGAAAGGGAAGAAGAATTGCTGAACTGAAAGCAGAAAGGAATAACACCAGGCTGCT GTTAGAGCATTTGGAATGCCTTGTCTCCAGGCATGAGCGGTCTCTTAGGATGACCGTGGTGAAGAGACAAGCGCA GTCTCCAGCAGCGTGTCCAGCGAAGTGGAAGTGCTGAAAGCACTGAAGTCCTTATTTGAACACCACAAAGCTCT GGATGAAAAGGTGAGAGAGCGATTACGAGTAGCACTTGAAAGATGTAGTTTGTTAGAAGAGGAATTAGGTGCCAC ACACAAAGAGCTAATGATTCTTAAAGAACAGAATAATCAGAAAAAAACTCTAACAGATGGAGTGCTGGACATAAA CCATGAACAAGAAATACACCAAGCACGAGTGGAAAGAGATCTTCTGATGGTTCTTTAAGCCACGAGGAAGACCT TGCTAAAGTAATTGAGCTCCAAGAAATCATAAGTAAGCAGTCAAGGGAACAGAGCCAAATGAAAGAACGCCTGGC TTCCCTTTCCAGTCATGTGACAGAACTGGAAGAGGATCTGGACACGGCTAGAAAAGATCTCATCAAATCTGAAGA AATGAACACAAAATTGCAACGAGATGTCCGTGAAGCCATGGCCCAAAAGGAAGATATGGAAGAGAATCACTAC TCTTGAAAAACGCTACCTCGCTGCACAGCGTGAAGCCACATCTGTGCATGACCTCAATGATAAACTTGAAAATGA AATTGCAAATAAAGATTCTATGCATCGACAGACTGAAGATAAAAACCGCCAGTTACAGGAGCGCTTGGAATTGGC AGAGCAAAAGCTGCAACAGACACTGAGGAAGGCAGAGACGCTCCCGGAGGTGGAGGCGGAGCTGGCCCAGAGGGT GGCAGCGCTTTCCAAGGCTGAAGAGAGACACGGCAACATTGAAGAAAGGTTACGACAGATGGAAGCACAGTTGGA GGAGAAGAATCAAGAACTGCAGCGGGCAAGGCAAAGAGAAAAAATGAACGAAGAACATAATAAACGTTTATCAGA CACTGTTGACAAGCTGCTTTCAGAATCTAATGAGAGGCTTCAACTTCATCTTAAAGAGAGAATGGCTGCTTTGGA AGATAAGAACTCTCTTTTAAGAGAAGTTGAAAGTGCAAAAAAGCAGTTAGAAGAAACACAACACGATAAGGATCA GCTTGTCCTAAACATTGAAGCACTGAGGGCTGAACTAGACCACATGAGACTAAGAGGTGCTTCACTTCATCATGG TGCAGTGCTGCGGCGCCCACAGAAAGGCCGGCTGGCAGCCCTGCGAGATGAGCCTTCCAAGGTACAAACTCTTAA TGAGCAGGATTGGGAACGTGCCCAGCAAGCTAGTGTCTTGGCAAATGTAGCACAAGCATTCGAGAGTGATGCTGA CGTGTCTGATGGTGAAGATGACAGGGACACTCTCCTCAGCTCAGTTGACCTGCTATCGCCCAGCGGGCAGGCCGA CGCGCACACACTAGCCATGATGCTTCAGGAGCAGCTGGACGCCATCAACAAAGAGATCAGGTTGATTCAGGAAGA AAAAGAAAATACAGAGCAGCGGGCAGAGGAGATTGAAAGTCGAGTTGGCAGTGGAAGTCTAGACAATCTTGGTCG TTTTAGATCAATGAGCTCCATTCCCCCCTACCCTGCTTCCTCGCTTGCTAGCTCCTCCCCTCCGGGCAGTGGGCG CTCCACCCACGAAGGATCCCTCACAGCCCAGCTCGGGAAGTGGACAGACTGGGCGTCATGACCCTTTTGCCACC TTCCAGAGAGAGGGTACGAGATGACAAGACAACCATAAAGTGTGAAACCTCCCCGCCTTCCTCCCCGAGAGCCCT TCGGTTAGACCGGCTGCACAAAGGGGCGCTGCACACCGTCAGCCACGAGGACATCAGGGACATAAGGAACTCCAC AGGCTCCCAGGATGGTCCCGTGAGCAACCCCAGCAGTAGCAACAGTAGCCAGGACTCGCTCCACAAAGCCCCCAAA AGAAGCATTAGGACAAGCTGGTGTTTCCGAGACGGATAACTCATCTCAGGATGCCTTGGGACTTAGCAAATTGGG GGGACAGGCTGAAAAAATCGTAAACTTCAAAAAAAGCATGAATTGCTGGAGGAAGCCCGGAGACAAGGTTTACC TTTTGCCCAATGGGACGGCCAACGGTTGTGGTCTGGCTAGAGCTCTGGGTTGGGATGCCAGCCTGGTATGTGGC TGCCTGCCGAGCAAACGTGAAAAGCGGGGCCATCATGTCGGCCCTGTCCGACACAGAGATCCAGCGTGAGATTGG CATCAGCAACCCCTGCACAGGCTGAAGCTGAGGCTGGCCATCCAGGAGATCATGTCGCTGACCAGCCGTCTGC CCCGCCCACATCTAGAACGACACTCGCCTATGGGGACATGAACCACGAGTGGATCGGCAACGAGTGGCTCCCCAG CCTGGGCCTCCCCAGTACCGCAGCTACTTCATGGAGTGCCTTGTAGACGCCAGGATGCTGGACCACTTGACCAA GAAAGACCTTCGAGGGCAGCTGAAAATGGTCGACAGTTTTCACAGAAACAGTTTCCAGTGTGGAATTATGTGCCT GAGAAGGTTAAATTATGACCGGAAAGAACTGGAAAGAAAAAAGAGAAAAAGTCAGAGTGAAATAAAAGACGTGCT TGTTTGGAGCAATGATCGAGTGATTCGCTGGATCCTGTCAATTGGCCTTAAAGAATATGCAAACAATCTTATAGA GAGTGGTGTTCACGGAGCACTTCTGGCCTTAGATGAAACCTTCGACTTCAGTGCACTGGCACTGCTGTTACAGAT CCCGACGCAGAACACACAGGCTCGTGCTGTCTTGGAAAGAGAATTTAACAACCTTTTGGTCATGGGGACTGATAG

3597/6881 FIGURE 3316B

AAGGTTTGATGAAGATGATGATAAAAGCTTTAGGAGAGCACCTTCATGGAGAAAAAAGTTTAGACCAAAGGACAT
TCGTGGCTTAGCTGCTGGGTCAGCAGAGACTCTCCCTGCAAACTTCCGGGTGACTTCTTCTATGTCTTCCCCCTC
TATGCAGCCAAAGAAGATGCAGATGGACGGCAATGTATCAGGAACACAGAGGTTGGATTCTGCTACAGTCAGGAC
TTACTCCTGCTAAAGTCTCCTGTTGTTTACCCACACTACTTCTACAGATGATTATGCAGCATTTGAATCCAACAA.
AGACTACATTTTGGAACCAGTGGAATCTTTAATCTTGTTAATACTTGTTATATGGACCCTAAGATATTTTATTAC
AGAGTTTTTAATTAGTGAAAAATTCATGAATACCATAGAGAAAAATATTTTAGAATTTAATGTTTCTTATATTTAT
GTAAACTTATGACTCTTCATTTATATAGTTACTTACTTTTCTATATTCCAGGCTATAAATATCCTTTCAAAT
CATGTTCTTATACCTAATTTTAGTCTTTCAAATGAATGCTTGTAATGCTTGTATATAAAATTCCTATGAATAGA
GGGCTTTTGTAAAATTATGCATTTATTGTAATTATCATTAATTTTTTAATGATAAACCATGACAAAGGATTTTACG
TTTATAAAAATTATGACAGAAGCCATGTGCCCCCGAATTC

MMCEVMPTISEAEGPPGGGGGHGSGSPSQPDADSHFEQLMVSMLEERDRLLDTLRETQETLALTQGKLHEVGHER DSLQRQLNTALPQEFAALTKELNVCREQLLEREEEIAELKAERNNTRLLLEHLECLVSRHERSLRMTVVKRQAQS PAGVSSEVEVLKALKSLFEHHKALDEKVRERLRVALERCSLLEEELGATHKELMILKEQNNQKKTLTDGVLDINH EQENTPSTSGKRSSDGSLSHEEDLAKVIELQEIISKQSREQSQMKERLASLSSHVTELEEDLDTARKDLIKSEEM NTKLQRDVREAMAQKEDMEERITTLEKRYLAAQREATSVHDLNDKLENEIANKDSMHRQTEDKNRQLQERLELAE QKLQQTLRKAETLPEVEAELAQRVAALSKAEERHGNIEERLRQMEAQLEEKNQELQRARQREKMNEEHNKRLSDT VDKLLSESNERLQLHLKERMAALEDKNSLLREVESAKKQLEETQHDKDQLVLN1EALRAELDHMRLRGASLHHGR PHLGSVPDFRFPMADGHTDSYSTSAVLRRPQKGRLAALRDEPSKVQTLNEQDWERAQQASVLANVAQAFESDADV SDGEDDRDTLLSSVDLLSPSGQADAHTLAMMLQEQLDAINKEIRLIQEEKENTEQRAEEIESRVGSGSLDNLGRF RSMSSIPPYPASSLASSSPPGSGRSTPRRIPHSPAREVDRLGVMTLLPPSREEVRDDKTTIKCETSPPSSPRALR LDRLHKGALHTVSHEDIRDIRNSTGSQDGPVSNPSSSNSSQDSLHKAPKKKGIKSSIGRLFGKKEKGRPGQTGKE ALGQAGVSETDNSSQDALGLSKLGGQAEKNRKLQKKHELLEEARRQGLPFAQWDGPTVVVWLELWVGMPAWYVAA CRANVKSGAIMSALSDTEIQREIGISNPLHRLKLRLAIQEIMSLTSPSAPPTSRTTLAYGDMNHEWIGNEWLPSL GLPQYRSYFMECLVDARMLDHLTKKDLRGQLKMVDSFHRNSFQCGIMCLRRLNYDRKELERKREESQSEIKDVLV WSNDRVIRWILSIGLKEYANNLIESGVHGALLALDETFDFSALALLLQIPTQNTQARAVLEREFNNLLVMGTDRR FDEDDDKSFRRAPSWRKKFRPKDIRGLAAGSAETLPANFRVTSSMSSPSMQPKKMQMDGNVSGTQRLDSATVRTY SC

3599/6881 FIGURE 3318A

ACGAAGAGGTACGATTCCGGAGAATCGCGAGGCAGAGCGGGAGCGCGCAGCCAGGTGGAAACTAATTCTAAGCCA GACTGCTGGAGATCACCCTGTTCTAGTGTGTGGAGGCTTCCACCAGGAGGCGCATTGGAGTGACTGTCTGGCATC ACCAAGATGACACTCCACGCCACCCGGGGGGGTGCACTCCTCTCTTGGGTGAACAGTCTACACGTGGCTGACCCT GTGGAGGCTGTGCAGCTCCAGGACTGCAGCATCTTCATCAAGATCATTGACAGAATCCATGGCACTGAAGAG GGACAGCAAATCTTGAAGCAGCCGGTGTCAGAGAGAGACTTGGACTTTGTGTGCAGTTTTCTGCAGAAAATCGAAAAC ATCCCTCTTCCCCAGAATGCCTGGTATCTGCACAGAAGGTGCTAGAGGGATCAGAGCTGGAACTGGCGAAGATGA CCATGCTGCTCTTATACCACTCTACCATGAGCTCCAAAAGTCCCAGGGACTGGGAACAGTTTGAATATAAAATTC AGGCTGAGTTGGCTGTCATTCTTAAATTTGTGCTGGACCATGAGGACGGGCTAAACCTTAATGAGGACCTAGAGA ACTTCCTACAGAAAGCTCCTGTGCCTTCTACCTGTTCTAGCACATTCCCTGAAGAGCTCTCCCCACCTAGCCACC AGGCCAAGAGGGAGATTCGCTTCCTAGAGCTACAGAAGGTTGCCTCCTCTTCCAGTGGGAACAACTTTCTCTCAG GTTCTCCAGCTTCTCCCATGGGTGATATCCTGCAGACCCCACAGTTCCAGATGAGACGGCTGAAGAAGCAGCTTG $\verb|CTGATGAGAAGTAATAGGGATGAGCTGGAGCTAGCTGAGAACCGCAAGCTCCTCACCGAGAAGGATG|\\$ CACAGATAGCCATGATGCAGCAGCGCATTGACCGCCTAGCCCTGCAATGAGAAGCAGGCGGCCAGCCCACTGG AGCCCAAGGAGCTTGAGGAGCTGCGTGACAAGAATGAGAGCCTTACCATGCGGCTGCATGAAACCCTGAAGCAGT GCCAGGACCTGAAGACAGAGAGAGCCAGATGGATCGCAAAATCAACCAGCTTTCGGAGGAGAATGGAGACCTTT CCTTTAAGCTGCGGGAGTTTGCCAGTCATCTGCAGCAGCTACAGGATGCCCTCAATGAGCTGACGGAGGAGCACA GCAAGGCCACTCAGGAGTGGCTAGAGAAGCAGGCCCAGCTGGAGAAGGAGCTCAGCGCAGCCCTGCAGGACAAGA AATGCCTTGAAGAGAAGAACGAAATCCTTCAGGGAAAACTTTCACAGCTGGAAGAACACTTGTCCCAGCTGCAGG ATAACCCACCCAGGAGAAGGGCGAGGTGCTGGGTGATGTCTTGCAGCTGGAAACCTTGAAGCAAGAGGCAGCCA CTCTTGCTGCAAACAACACACAGCTCCAAGCCAGGGTAGAGATGCTGGAGACTGAGCGAGGCCAGCAGGAAGCCA AGCTGCTTGCTGAGCGGGGCCACTTCGAAGAAGAAAGCAGCAGCTGTCTAGCCTGATCACTGACCTGCAGAGCT CCATCTCCAACCTCAGCCAGGCCAAGGAAGAGCTGGAGCAGGCCTCCCAGGCTCATGGGGCCCGGTTGACTGCCC TGAAGCAGCCGGCCAAAGAGAAGCAGGCCCAGCTAGCACAGACCCTCCAACAGCAAGAACAGGCCTCCCAGGGCC TCCGCCACCAGGTGGAGCAGCTAAGCAGTAGCCTGAAGCAGAAGGAGCAGCTGAAGGAGGAGGAGCAGCTAGCGGAGAAGC AGGAGGCAACTAGGCAGGACCATGCCCAGCAACTGGCCACTGCTGCAGAGGAGGCGAGAGGCCTCCTTAAGGGAGC GGGATGCGGCTCTCAAGCAGCTGGAGGCACTGGAGAAGGAGAAGGCTGCCAAGCTGGAGATTCTGCAGCAGCAAC TTCAGGTGGCTAATGAAGCCCGGGACAGTGCCCAGACCTCAGTGACACAGGCCCAGCGGGAGAAGGCAGAGCTGA GCCGGAAGGTGGAGGAACTCCAGGCCTGTGTTGAGACAGCCCGCCAGGAACAGCATGAGGCCCAGGCCCAGGTTG CAGAGCTAGAGTTGCAGCTGCGGTCTGAGCAGCAAAAAGCAACTGAGAAAGGAAAGGGTGGCCCAGGAGAAGGACC AGCTCCAGGAGCAGCTCCAGGCCCTCAAAGAGTCCTTGAAGGTCACCAAGGGCAGCCTTGAAGAGGAGAAGCGCA GGGCTGCAGATGCCCTGGAAGAGCAGCAGCGTTGTATCTCTGAGCTGAAGGCAGAGACCCGAAGCCTGGTGGAGC AGCATAAGCGGGAACGAAAGGAGCTGGAAGAAGAGAGGGGCTGGGCGCAAGGGGCTGGAGGCTCGATTACAGCAGC AGGCACAGTATGGCGCCATGTTCCAGGAACAGCTGATGACTTTGAAGGAGGAATGTGAGAAGGCCCGCCAGGAGC CAGATGACCTCTCCACTCTGCAGGAAAAGATGGCTGCCACCAGCAAAGAGGTGGCCCGCTTGGAGACCTTGGTGC CCGAGTGGCTGGAAGAGCAACAGGGACGCCAGTTCTGCAGCACACAGGCAGCGCTGCAGGCTATGGAGCGGGAGG GTGGGCAGCAGGAAAGGGAGGTGGCGCGGCTGACCCAGGAGCGGGGCCGTGCCCAGGCTGACCTTGCCCTGGAGA AGGCGGCCAGAGCAGAGCTTGAGATGCGGCTGCAGAACGCCCTCAACGAGCAGCGTGTGGAGTTCGCTACCCTGC AAGAGGCACTGGCTCATGCCCTGACGGAAAAGGAAGGCAAGGACCAGGAGTTGGCCAAGCTTCGTGGTCTGGAGG AGGAGCACGCATCTGGCTCAGGAGCCCAATCTGAGGCTGCTGGCAGGACAGAGCCCAACAGGCCCCAAGCTGGAGG

3600/6881 FIGURE 3318B

GCCTCGAGGCTGAGCGGGCCTCCCGGGCTGAGCGGGACAGTGCTCTGGAGACTCTGCAGGGCCAGTTAGAGGAGA AGGCCCAGGAGCTAGGGCACAGTCAGAGTGCCTTAGCCTCGGCCCAACGGGAGTTGGCTGCCTTCCGCACCAAGG TACAAGACCACAGCAAGGCTGAAGATGAGTGGAAGGCCCAGGTGGCCCGGGGCCGGCAAGAGGCTGAGAGGAAAA ATAGCCTCATCAGCAGCTTGGAGGAGGAGGTGTCCATCCTGAATCGCCAGGTCCTGGAGAAGGAGGGGGAGAGCA AGGAGTTGAAGCGGCTGGTGATGGCCGAGTCAGAGAAGAGCCAGAAGCTGGAGGAGAGGCTGCGCCTGCTGCAGG CAGAGACAGCCAGCAACAGTGCCAGAGCTGCAGAACGCAGCTCTGCTCTGCGGGAGGAGGTGCAGAGCCTCCGGG AGGAGGCTGAGAAACAGCGGGTGGCTTCAGAGAACCTGCGGCAGGAGCTGACCTCACAGGCTGAGCGTGCGGAGG AGCTGGGCCAAGAATTGAAGGCGTGGCAGGAGAAGTTCTTCCAGAAAGAGCAGGCCCTCTCCACCCTGCAGCTCG AGCACACCAGCACACAGGCCCTGGTGAGTGAGCTGCCGGCCAGCTAAGCACCTCTGCCAGCAGCTGCAGGCCGAGC AGGCCGCTGCCGAGAAACGCCACCGTGAGGAGCTGGAGCAGGCAAGCAGGCCGCTGGGGGACTGCGGGCAGAGC TGCTGCGGGCCCAGCGGGAGCTTGGGGAGCTGATTCCTCTGCGGCAGAAGGTGGCAGAGCAGGAGCGAACAGCTC AGCAGCTGCGGGCAGAGAAGGCCAGCTATGCAGAGCAGCTGAGCATGCTGAAGAAGGCGCATGGCCTGCTGGCAG AGGAGAACCGGGGGCTGGGTGAGCGGGCCAACCTTGGCCGGCAGTTTCTGGAAGTGGAGTTGGACCAGGCCCGGG AGAAGTATGTCCAAGAGTTGGCAGCCGTACGTGCTGATGCTGAGACCCGTCTGGCTGAGGTGCAGCGAGAAGCAC AGAGCACTGCCCGGGAGCTGGAGGTGATGACTGCCAAGTATGAGGGTGCCAAGGTCAAGGTCCTGGAGGAGAGGC AGCAGGTGGAAGAACTGAGTAAGAAACTGGCTGACTCTGACCAAGCCAGCAAGGTGCAGCAGCAGAAGCTGAAGG AGTTGAGCCAGAAGGAGCAGCAGCTGAGCACTATAAGCTGCAGATGGAGAAAGCCAAAACACATTATGATGCCA AGAAGCAGCAGAACCAAGAGCTGCAGGAGCAGCTGCGGAGCCTGGAGCAGCAGAAGGAAAACAAAGAGCTGC GAGCTGAAGCTGAACGGCTGGGCCATGAGCTACAGCAGGCTGGGCTGAAGACCAAGGAGGCTGAACAGACCTGCC GCCACCTTACTGCCCAGGTGCGCAGCCTGGAGGCACAGGTTGCCCATGCAGACCAGCAGCTTCGAGACCTGGGCA AATTCCAGGTGGCAACTGATGCTTTAAAGAGCCGTGAGCCCCAGGCTAAGCCCCAGCTGGACTTGAGTATTGACA ${\tt CCAGCGTCCCTGGAGAACCAGCCTCACCTATCTCCCAGCGCCTGCCCCCCAAGGTAGAATCCCTGGAGAGTCTCT}$ ACTTCACTCCCATCCCTGGAGTCAGGCCCCCCTGGAGAGCAGCCTGGACTCCCTGGGAGACGTCTTCCTGG ACTCGGGTCGTAAGACCCGCTCCGCTCGGCGCACCACGCAGATCATCAACATCACCATGACCAAGAAGCTAG ATGTGGAAGAGCCAGACAGCGCCAACTCATCGTTCTACAGCACGCGGTCTGCTCCCTGCTTCCCAGGCTAGCCTGC GAGCCACCTCCTCTACTCAGTCTCTAGCTCGCCTGGGTTCTCCCGATTATGGCAACTCAGCCCTGCTCAGCTTGC CTGGCTACCGCCCCACCACTCGCAGTTCTGCTCGTCGTTCCCAGGCCGGGTGTCCAGTGGGGCCCCTCCAGGAA GGAACAGCTTCTACATGGGCACTTGCCAGGATGAGCCTGAGCAGCTGGATGACTGGAACCGCATTGCAGAGCTGC AGCAGCGCAATCGAGTGTGCCCCCCACATCTGAAGACCTGCTATCCCCTGGAGTCCAGGCCTTCCCTGAGCCTGG GCACCATCACAGATGAGAGATGAAAACTGGAGACCCCCAAGAGACCCTGCGCCGAGCCAGCATGCAGCCAATCC AGATAGCCGAGGGCACTGGCATCACCACCCGGCAGCAGCGCAAACGGGTCTCCCTAGAGCCCCACCAGGGCCCTG GAACTCCTGAGTCTAAGAAGGCCACCAGCTGTTTCCCACGCCCCATGACTCCCCGAGACCGACATGAAGGGCGCA AACAGAGCACTACTGAGGCCCAGAAGAAAGCAGCTCCAGCTTCTACTAAACAGGCTGACCGGCGCCAGTCGATGG CCTTCAGCATCCTCAACACCCCAAGAAGCTAGGGAACAGCCTTCTGCGGCGGGGGAGCCTCAAAGAAGGCCCTGT $\tt CTGCTGCCGCCATTGGTGCCACCCCTCGAGCCAAGGGCAAGGCAAGCAC\underline{TAA}AGGGCCAGTACCAGTGAGTGGCCAGTGGCCAGTGGCCAGTGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGTGGGCCAGGGCCAGGGCCAGGGCCAGTGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGCCAGGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCCAGGCCAGGCCAGGGCCAGGGCCAGGCAGGCCAGGCCAGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGGCCAGGCAGGCA$ CCCACCTGTGTCCCCGATGCTGACCTCACCTGGTCCTCCGCCTACTGTCCCTCTCAGTGCCTTCTCAGCTCCC $\tt CGCCTTCTCGGAGCTGGCCCAGGGGGCCTGGAGCATGGACAGTGTGGGCGCTCTCCCTACCTTGCCTCCTTTTTT$ CTTAAAGCAAAGTCACTTCTCCATCACAACCAGATTTGAGGCTGGTTTTGATGGCTGGGTCCTTGGGCCTGGCCA GTCTTCCTCTTAGCCTCTGGATCTAGAAGGGACCATAAGAGGAGTAGGCCCTGGTTCCTGCTGTCCTGGTGGCTG GGCCCAGCAGGGGCCCTCACTCTTGAAGTCCAGGACTGGGTCTGACCTGGTGGGAGCACCTGCCAGAGGATGCTC TTTCCCAGGACGGATGGGCCCTATGTCTCAGGAGTGGGGTTGGGGGACAGCCTTCAGCAGCAGCTCACACCCTAC AATGTTATTACTTGTAAATAAAGTCTATTTTTCTCCCGTG

PCT/US2003/028547

3601/6881 FIGURE 3319

MTMLLLYHSTMSSKSPRDWEQFEYKIQAELAVILKFVLDHEDGLNLNEDLENFLQKAPVPSTCSSTFPEELSPPS HQAKREIRFLELQKVASSSSGNNFLSGSPASPMGDILQTPQFQMRRLKKQLADERSNRDELELELAENRKLLTEK DAOIAMMOORIDRLALLNEKQAASPLEPKELEELRDKNESLTMRLHETLKQCQDLKTEKSQMDRKINQLSEENGD LSFKLREFASHLQQLQDALNELTEEHSKATQEWLEKQAQLEKELSAALQDKKCLEEKNEILQGKLSQLEEHLSQL QDNPPQEKGEVLGDVLQLETLKQEAATLAANNTQLQARVEMLETERGQQEAKLLAERGHFEEEKQQLSSLITDLQ SSISNLSQAKEELEQASQAHGARLTAQVASLTSELTTLNATIQQQDQELAGLKQQAKEKQAQLAQTLQQQEQASQ GLRHQVEQLSSSLKQKEQQLKEVAEKQEATRQDHAQQLATAAEEREASLRERDAALKQLEALEKEKAAKLEILQQ OLQVANEARDSAQTSVTQAQREKAELSRKVEELQACVETARQEQHEAQAQVAELELQLRSEQQKATEKERVAQEK DQLQEQLQALKESLKVTKGSLEEEKRRAADALEEQQRCISELKAETRSLVEQHKRERKELEEERAGRKGLEARLQ OLGEAHOAETEVLRRELAEAMAAQHTAESECEQLVKEVAAWRERYEDSQQEEAQYGAMFQEQLMTLKEECEKARQ ELQEAKEKVAGIESHSELQISRQQNELAELHANLARALQQVQEKEVRAQKLADDLSTLQEKMAATSKEVARLETL vrkageqqetasrelvkeparagdrqpewleeqqgrqfcstqaalqamereaeqmgnelerlraalmesqgqqqe ERGQQEREVARLTQERGRAQADLALEKAARAELEMRLQNALNEQRVEFATLQEALAHALTEKEGKDQELAKLRGL EAAQIKELEELRQTVKQLKEQLAKKEKEHASGSGAQSEAAGRTEPTGPKLEALRAEVSKLEQQCQKQQEQADSLE RSLEAERASRAERDSALETLQGQLEEKAQELGHSQSALASAQRELAAFRTKVQDHSKAEDEWKAQVARGRQEAER KNSLISSLEEEVSILNRQVLEKEGESKELKRLVMAESEKSQKLEERLRLLQAETASNSARAAERSSALREEVQSL REEAEKQRVASENLRQELTSQAERAEELGQELKAWQEKFFQKEQALSTLQLEHTSTQALVSELLPAKHLCQQLQA <u>EQAAAEKRHREELEQSKQAAGGLRAELLRAQRELGELIPLRQKVAEQERTAQQLRAEKASYAEQLSMLKKAHGLL</u> AEENRGLGERANLGRQFLEVELDQAREKYVQELAAVRADAETRLAEVQREAQSTARELEVMTAKYEGAKVKVLEE RQRFQEERQKLTAQVEQLEVFQREQTKQVEELSKKLADSDQASKVQQQKLKAVQAQGGESQQEAQRLQAQLNELQ AQLSQKEQAAEHYKLQMEKAKTHYDAKKQQNQELQEQLRSLEQLQKENKELRAEAERLGHELQQAGLKTKEAEQT $\tt CRHLTAQVRSLEAQVAHADQQLRDLGKFQVATDALKSREPQAKPQLDLSIDSLDLSCEEGTPLSITSKLPRTQPD$ GTSVPGEPASPISORLPPKVESLESLYFTPIPARSQAPLESSLDSLGDVFLDSGRKTRSARRRTTQIINITMTKK LDVEEPDSANSSFYSTRSAPASQASLRATSSTQSLARLGSPDYGNSALLSLPGYRPTTRSSARRSQAGVSSGAPP ${\tt GRNSFYMGTCQDEPEQLDDWNR1AELQQRNRVCPPHLKTCYPLESRPSLSLGTITDEEMKTGDPQETLRRASMQP}$ IQIAEGTGITTRQQRKRVSLEPHQGPGTPESKKATSCFPRPMTPRDRHEGRKQSTTEAQKKAAPASTKQADRRQS MAFSILNTPKKLGNSLLRRGASKKALSKASPNTRSGTRRSPRIATTTASAATAAAIGATPRAKGKAKH

 ${\tt MSTLFPSLFPRVTETLWFNLDRPCVEETELQQQEQQHQAWLQSIAEKDNNLVPIGKPASEHYDDEEEEDDEDDED}\\ {\tt SEEDSEDDEDMQDMDEMNDYNESPDDGEVNEVDMEGNEQDQDQWMI}$

3604/6881 FIGURE 3322A

TCCCCGGCTCTGTCCGGCCCACGGATCCTCAAGCCCGGGCCCCGGGCCCCAGCCTCAGCCCTGAGCGTCT GCCGGGCCCGGGGGCCCCTGGGCAGCCAGGCCCCTCCTGGTACCACCGCGACCTGAGCCGGGCCGCCGGA GGAGCTGCTGGCCCGGGCGGGCCGCGATGGCAGCTTCCTGGTCCGAGACAGCGAGAGCGTGGCGGGGGCCTTCGC GCTCTGCGTCCTGTATCAGAAGCATGTGCACACGTATCGCATTCTGCCTGATGGAGAAGATTTCTTGGCTGTGCA GACCTCGCAGGGTGTGCCTGTGCGCCGCTTCCAGACCCTGGGTGAGCTCATCGGCCTGTACGCCCAGCCCAACCA GGGCCTTGTGTGCGCCCTGCTTCTTCCTGTAGAGGGTGAGCGAGAGCCGGACCCACCGGATGACCGGATGCCTC AGATGGGGAGGATGAGAAGCCCCCGCTGCCCCCGCGCTCTGGCTCCACCAGCATTTCTGCCCCCACTGGGCCCAG CACCCGTACCCTCGCTACCTCATGCCGGAGGCTGCACAGTGAGGTGGACAAGGTCCTGTCAGGCCTGGAGATCCT GGAGCAGGAACTAGAGAGCCTGGTGCTGAAGCTGTCAGTGCTAAAGGACTTCCTGTCAGGCATCCAGAAGAAGGC CCTGAAGGCCCTACAGGACATGAGCTCCACAGCACCCCCAGCTCCGCAGCCATCCACACGTAAGGCCAAGACCAT CCCCGTGCAGGCCTTTGAGGTGAAGCTAGATGTGACCCTGGGTGACCTGACCAAGATTGGGAAGTCACAGAAGTT CACGCTGAGCGTGGATGTGGAGGGTGGGCGGCTGGTGCTGCTGCGGAGACAGCGGGACTCCCAGGAGGACTGGAC CACCTTCACGCACGCCCATCCGCCAGCTCATTAAGTCCCAGCGTGTCCAGAACAAGCTGGGTGTTGTGTTTGA GAAGGAGAAGGACCGGACTCAGCGCAAGGACTTCATCTTTGTCAGTGCCCGGAAGCGGGAGGCCTTCTGCCAGCT GTTGCAGCTCATGAAGAACAAGCACTCCAAGCAGGACGAGCCCGACATGATCTCAGTCTTCATAGGCACCTGGAA CATGGGAAGTGTACCACCTCCAAAAAACGTGACATCCTGGTTCACATCGAAGGGTCTGGGGAAGACCCTGGACGA GGTCACAGTGACCATACCCCATGACATCTATGTCTTTGGGACCCAGGAGAACTCAGTGGGCGACCGCGAGTGGCT GGACCTACTGCGCGGGGGCCTCAAGGAGCTTACGGATCTGGATTACCGCCCGATTGCCATGCAATCACTGTGGAA TATCAAGGTGGCAGTGCTGGTCAAGCCAGAGCACGAGAACCGTATCAGCCATGTCAGTACGTCCAGTGTGAAGAC TGGCATCGCCAACACCCTGGGGAACAAGGGGGCTGTGGGCGTCTCCTTCATGTTTAATGGCACCTCATTTGGCTT TGTGAATTGTCACCTCACCTCGGGAAATGAGAAGACGGCTCGGAGGAACCAAAACTACTTGGACATCCTGCGGCT GCTCTCGCTGGGCGACCGGCAGCTCAATGCCTTTGACATCTCTCTGCGTTTCACACACCTCTTCTGGTTTGGGGA CCTCAACTACCGCCTGGACATGGATATCCAGGAGATCCTGAACTACATCAGCAGGAAAGAGTTTGAGCCCCTCCT CCCACCCACCTACCGCTATGAGCGGGGTTCCCGGGACACATATGCCTGGCACAAGCAGAAGCCAACTGGGGTCCG GACCAATGTGCCCTCATGGTGTGACCGGATTCTGTGGAAATCCTACCCTGAAACTCACATCATCTGCAATTCTTA TGGTTGCACTGATGACATCGTCACCAGCGACCATTCCCCCGTGTTTGGGACATTTGAGGTTGGAGTTACCTCCCA GTTCATCTCCAAGAAAGGGCTCTCAAAGACTTCAGACCAGGCCTACATTGAGTTTGAGAGCATCGAGGCCATTGT GAATGATGCCCAGAGCAGTGACAACATCAACTTCCTCAAAGTGCAGTGGTCTTCACGCCAGCTGCCCACGCTCAA ATCCTATGGGGAGTGTGGGTTGCACTCAAATCCATGATCGGCAGCACGGCCCAACAGTTCCTGACCTTCCTATC CCACCGTGGCGAGGAGACAGGCAATATCAGAGGCTCCATGAAGGTGCGGGTGCCCACGGAGCGCCTGGGCACCCG TGAGCGGCTCTACGAGTGGATCAGCATTGATAAGGÀTGAGGCAGGAGCAAAGAGCAAAGCCCCCTCTGTGTCCCG TAACCCTGCCTACTACGTCCTTGAAGGGGTCCCGCACCAGCTGCTGCCCCGGAGCCACCCTCGCCTGCCAGGGC CCCTGTCCCATCTGCCACCAAGAACAAAGTGGCCATTACAGTGCCTGCTCCACAGCTTGGGCACCACCGGCACCC TCGTGTGGGAGAGGGGAGTTCTTCAGATGAGGAGTCTGGAGGCACACTGCCCCCTCCAGACTTTCCACCTCCACC ACTGCCGGACTCAGCCATCTTCCTGCCCCCAGCCTGGATCCTTTACCAGGGCCAGTGGTCCGGGGCCGTGGTGG CACTTTCCTGGGGGAAGTGGGCAGTGGGGATGACCGGTCCTGCTGCTGCAGATGGCCAAGACGCTGAGCGA

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GGTGGACTATGCCCCTGCTGGGCCTGCACGCTCAGCGCTCCCCAGGCCCCCTGGAGCTGCAGCCCCCCGGGG ACTGCCCTCGGACTATGGCCGGCCCCTCAGCTTCCCTCCACCCGCATCCGGGAGAGCATCCAGGAAGACCTGGC AGAGGAGGCTCCGTGCCTGCAGGGCGGGCGGGCCAGCGGGCTGGGCGAGGCATGAGTGCCTGGCTGCGGGC ${\tt CATCGGCTTGGAGCGCTATGAGGAGGGCCTGGTGCATAATGGCTGGGACGACCTGGAGTTTCTCAGTGACATCAC}$ $\tt CGAGGAGGACTTGGAGGAGGCTGGGGTGCAGGACCCGGCTCACAAGCGCCTCCTTCTGGACACCCTGCAGCTCAG$ ATTCCCCGCTGCCCAATCATTTGCAATGCCCTAATTAGGGCATCCTGCCCTCTTTTAGGCTCAGGACGGAA ${\tt GGTCAGTTGCCATGGTTACCGAGGACCCTGGTTACTCTGGTGCTGTCCTGTTTTTACTGGACCCCGCCTCCCAGCC}$ CCAGGGGTGCCTGTGGGGTCCATTTGGGTACGTCTGGGCCCCCACTTTCACCAGTTTCTGCGGCCTTCCACCGG TTAATATTATTGGGGTTGGTTGGGGTGGGGCAGGATCTCAGCCATAAAGTGCCAGTTTGCTTAGTTCTCACTGTC TCCTGGTCTGTGCCCTGCTCTGGGGATGCACGGCGGCAGGGTGGGGGAGGTTCCTCGCAGGTCTCAGC $\tt CCGGGACAGGGTCTTGCAAGCAGCCTCCTGGGCAGTCGTAAGGGTTGCGGCGTGATGTCTTCAATAAATTAAGTT$ TTATTTGGAAAA

 ${\tt MASACGAPGPGGALGSQAPSWYHRDLSRAAAEELLARAGRDGSFLVRDSESVAGAFALCVLYQKHVHTYRILPDG}$ EDFLAVQTSQGVPVRRFQTLGELIGLYAQPNQGLVCALLLPVEGEREPDPPDDRDASDGEDEKPPLPPRSGSTSI SAPTGPSSPLPAPETPTAPAAESAPNGLSTVSHDYLKGSYGLDLEAVRGGASHLPHLTRTLATSCRRLHSEVDKV ${\tt LSGLEILSKVFDQQSSPMVTRLLQQQNLPQTGEQELESLVLKLSVLKDFLSGIQKKALKALQDMSSTAPPAPQPS}$ ${\tt TRKAKTIPVQAFEVKLDVILGDLTKIGKSQKFTLSVDVEGGRLVLLRRQRDSQEDWTTFTHDRIRQLIKSQRVQN}$ KLGVVFEKEKDRTQRKDFIFVSARKREAFCQLLQLMKNKHSKQDEPDMISVFIGTWNMGSVPPPKNVTSWFTSKG LGKTLDEVTVTIPHDIYVFGTQENSVGDREWLDLLRGGLKELTDLDYRPIAMQSLWNIKVAVLVKPEHENRISHV STSSVKTGIANTLGNKGAVGVSFMFNGTSFGFVNCHLTSGNEKTARRNQNYLDILRLLSLGDRQLNAFDISLRFT HLFWFGDLNYRLDMDIQEILNYISRKEFEPLLRVDQLNLEREKHKVFLRFSEEEISFPPTYRYERGSRDTYAWHK QKPTGVRTNVPSWCDRILWKSYPETHIICNSYGCTDDIVTSDHSPVFGTFEVGVTSQFISKKGLSKTSDQAYIEF ESIEAIVKTASRTKFFIEFYSTCLEEYKKSFENDAQSSDNINFLKVQWSSRQLPTLKPILADIEYLQDQHLLLTV KSMDGYESYGECVVALKSMIGSTAQQFLTFLSHRGEETGNIRGSMKVRVPTERLGTRERLYEWISIDKDEAGAKS KAPSVSRGSQEPRSGSRKPAFTEASCPLSRLFEEPEKPPPTGRPPAPPRAAPREEPLTPRLKPEGAPEPEGVAAP PPKNSFNNPAYYVLEGVPHQLLPPEPPSPARAPVPSATKNKVAITVPAPQLGHHRHPRVGEGSSSDEESGGTLPP PDFPPPPLPDSAIFLPPSLDPLPGPVVRGRGGAEARGPPPPKAHPRPPLPPGPSPASTFLGEVGSGDDRSCSVLQ ${\tt MAKTLSEVDYAPAGPARSALLPGPLELQPPRGLPSDYGRPLSFPPPRIRESIQEDLAEEAPCLQGGRASGLGEAG}$ MSAWLRAIGLERYEEGLVHNGWDDLEFLSDITEEDLEEAGVQDPAHKRLLLDTLQLSK

GATAACAAGACCTCTGCCAGAAGAACCATGGCTTTGGAAGGCGGAGTTCAGGCTGAGGAGATGGGTGCGGTCCTC TCTGGGCTTGCCACCCACCACCTGTGTCTACCGCGAGAACTTCAAGCAACTGCTGCTGCCACCTGTGTATTCGGC GGTGCTGGCGGCTGCCGCTGAACATCTGTGTCATTACCCAGATCTGCACGTCCCGCCGGGCCCTGACCCG CACGGCCGTGTACACCCTAAACCTTGCTCTGGCTGACCTGCTATATGCCTGCTCCTGCCCCTGCTCATCTACAA $\verb|CTATGCCCAAGGTGATCACTGGCCCTTTGGCGACTTCGCCTGCCGCCTGGTCCGCTTCTTCTATGCCAACCT|\\$ GCACGGCAGCATCCTCTCCTCACCTGCATCAGCTTCCAGCGCTACCTGGGCATCTGCCACCCGCTGGCCCCCTG GCCCACAGCCATCTTCGCTGCCACAGGCATCCAGCGTAACCGCACTGTCTGCTATGACCTCAGCCCGCCTGCCCT GGCCACCCACTATATGCCCTATGGCATGGCTCTCACTGTCATCGGCTTCCTGCTGCCCTTTGCTGCCCTGCTGGC $\tt CTGCTACTGTCTCCTGGCCTGCCGCCTGTGCCGCCAGGATGGCCCGGCAGAGCCTGTGGCCCAGGAGCGGCGTGG$ CAAGGCGGCCCGCATGGCCGTGGTGGTGGCTGCCTTTGCCATCAGCTTCCTGCCTTTTCACATCACCAAGAC AGCCTACCTGGCAGTGCGCTCGACGCCGGGCGTCCCCTGCACTGTATTGGAGGCCTTTGCAGCGGCCTACAAAGG CACGCGGCCGTTTGCCAGTGCCAACAGCGTGCTGGACCCCATCCTCTTCTACTTCACCCAGAAGAAGTTCCGCCG GCGACCACATGAGCTCCTACAGAAACTCACAGCCAAATGGCAGAGGCAGGGTCGCTGAGTCCTCCAGGTCCTGGG CAGCCTTCATATTTGCCATTGTGTCCGGGGCACCAGGAGCCCCACCAACCCCAAACCATGCGGAGAATTAGAGTT CAGCTCAGCTGGGCATGGAGTTAAGATCCCTCACAGGACCCAGAAGCTCACCAAAAACTATTTCTTCAGCCCCTT CTCTGGCCCAGACCCTGTGGGCATGGAGATGGACAGACCTGGGCCTGGCTCTTGAGAGGTCCCAGTCAGCCATGG AGAGCTGGGGAAACCACATTAAGGTGCTCACAAAAATACAGTGTGACGTGTACTGTCA

CGCGTCCTGTCCCGGCGCCTTCCGCGCACCGGCCACCGCCAGTCTCCGAGCCCCGTGACCTGCAGGTCCTCCGGC GCCGGCGGGGCCCGGAGCGGTCCCCGGCCCGGGAAACTTGGACCGAGACCAGGCCGGCGACCACCAGGGGCCTGA $\mathsf{GG}\mathtt{ATG}\mathtt{AAGCCAAGTCTGCTGTGCCGGCCCCTGTCCTGCTTCCTTATGCTGCCCTGGCCTCTCGCCACCCTGA$ CATCAACAACCCTTTGGCAGTGCCCACCTGGGGAGGCACCTGGACCCAGGGCAGGGCACATTATGCAGGC $\tt CCTGCCCCCAGGCACCTTCTCAGCTGCATGGGGGCTCCAGCCCATGCCCATGCCCGTTGCAGCCTTTGGA$ GGAGGCTGGAGGCCCAGGTGGGCATGGCAACTCGAGATACACTCTGTGGAGACTGCTGGCCTGGGTGGTTTGGGC CTTGGGGGGTTCCCCGCGTTCCATGTCAACCATGTTCCTGGGCACCTCTGGGTACTCATGGCTGTGATGAGTGGG GGCGGCGGGCCCGACGTGGCGTGGAGGTGGCAGCAGGGGCCAGCCGGTGGTGAGACACGGCAGCCTGGGAACG GCACCCGGGCAGGTGGCCCAGAGGAGACAGCCGCCCAGTACGCGGTCATCGCCATCGTCCTGTCTTCTGCCTCA TGGGGCTGTTGGGCATCCTGGTGTGCAACCTCCTCAAGCGGAAGGGCTACCACTGCACGGCGCACAAGGAGGTCG GGCCCGGCCCTGGAGGTGGAGGCAGTGGAATCAACCCTGCCTACCGGACTGAGGATGCCAATGAGGACACCATTG GGGTCCTGGTGCGCTTGATCACAGAGAAGAAGAGAATGCTGCGGCCCTGGAGGAGCTGCTGAAAGAGTACCACA GCAAACAGCTGGTGCAGACGAGCCACAGGCCTGTGTCCAAGCTGCCGCCAGCGCCCCCGAACGTGCCACACATCT GCCCGCACCGCCACCATCTCCACACCGTGCAGGGCCTGGCCTCGCTCTCTGGCCCCTGCTGCTCCCGCTGTAGCC AGAAGAAGTGGCCCGAGGTGCTGCTGTCCCCTGAGGCTGTAGCCGCCACTACTCCTGTTCCCAGCCTTCTGCCTA TCCGCGTGGCTCGAATTCCTGAGCAGCGGACAAGTTCAATGGTGTCTGAGGTGAAGACCATCACGGAGGCTGGGC CCTCGTGGGGTGATCTCCCTGACTCCCCACAGCCTGGCCTCCCCCTGAGCAGCAGCCCTGCTAGGAAGTGGCG GAAGCCGTACAAAGTGGCTGAAGCCCCCAGCAGAGAACAAGGCCGAGGAGAACCGCTATGTGGTCCGGCTAAGTG CCTGGAGGAGGTGGAGCTGCAGCTGGGACTGTGAGGACCGAGAAGCAATGGCCCAGCAGACGAGACAGCAAAGAC CAAGGCCTGGAGGTGGGAGCGTCTGCCCCAGTGAGGAGGCAGGTGGCCGGCGGGCACTGTGTACAGGAGCAGGCT TCCTAGGAGCCCACGGGATTCTCTGTATCATCAGAGGCTGGGCTTGGCAGAGGGGGAGGGGCCTGTGCCCGTCACC CCTGGCCCCATTCCTTGGTAATTAGCCACACCCTTGCCTCTKTACAGGGCCCTAAGARCAGATGTKCGTYCCCCT CCTYTTYCAGCAGGTCTATAAAGGGAAAGGGGTAGCAGAAAAGTCCTGGGCTARGAGAGTGAGTCCCTGGGTTCT AATCTTGGGCACATCTGTGSCCATCRCTGGGTCCATTTTTCTSACTGTGAAGTAAGGAGAGAMGTCTCAGTACCC AGGGCCTCTTCAGCTCTTTGTAGGTTCTGGGCTGGGTTGTGGGGGACTGGGGAGCTGGGCTTCTACCAATCCCCT CCCCAATTAGTAGCTTTTATCCCAGCCCCCGTTTTTTGCTGCTTTCCAGGGCCCTTCTGCCTTCAAGGCCCCCATG ATGAAACTGAAAAAATAGACTTGATCCCGGCAGGACTGTGATACAGAGCCCTAGCCCTGCCCAGCCCCAA GATCTCAGGAGCTTTAGGGAGAGACTTGGTGGGGCTGGAGCACCCTTGGGCCTTCAGTGGTTCTGTGTCCCT GTGGTGCCAGTGCTTCTGGGCAGTGCAGGCCGGCTGCCAGGCCCTGACTTCCACTCTGGCTCAGCAACCTG ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MKPSLLCRPLSCFLMLLPWPLATLTSTTLWQCPPGEEPDLDPGQGTLCRPCPPGTFSAAWGSSPCQPHARCSLWR RLEAQVGMATRDTLCGDCWPGWFGPWGVPRVPCQPCSWAPLGTHGCDEWGRRARRGVEVAAGASSGGETRQPGNG TRAGGPEETAAQYAVIAIVPVFCLMGLLGILVCNLLKRKGYHCTAHKEVGPGPGGGGSGINPAYRTEDANEDTIG VLVRLITEKKENAAALEELLKEYHSKQLVQTSHRPVSKLPPAPPNVPHICPHRHHLHTVQGLASLSGPCCSRCSQ KKWPEVLLSPEAVAATTPVPSLLPNPTRVPKAGAKAGRQGEITILSVGRFRVARIPEQRTSSMVSEVKTITEAGP SWGDLPDSPQPGLPPEQQALLGSGGSRTKWLKPPAENKAEENRYVVRLSESNLVI

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WO 2004/030615 PCT/US2003/028547

3612/6881 FIGURE 3329

GGCGGCGGCAGCTGTACAGGGCGGAGAAGCGGTGGTAGCGGAGGCTGTAGTGGGGCTGGTGGTGCTTCCAACTG GGATGGATCAGCTGTGAAAAACTCTTTGGATGATTCTGCCAAAAAGGTACTTCTGGAAAAAATACAAATATGTGGA GAATTTTGGTCTAATTGATGGTCGCCTCACCATCTGTACAATCTCCTGTTTCTTTGCCATAGTGGCTTTGATTTG GGATTATATGCACCCCTTTCCAGAGTCCAAACCCGTTTTGGCTTTGTGTGTCATATCCTATTTTGTGATGATGGG GATTCTGACCATTTATACCTCATATAAGGAGAAGAGCATCTTTCTCGTGGCCCACAGGAAAGATCCTACAGGAAT GGATCCTGATGATATTTGGCAGCTGTCCTCCAGTCTTAAAAGGTTTGATGACAAATACACCTTGAAGCTGACCTT CATCAGTGGGAGAACAAAGCAGCAGCGGGAAGCCGAGTTCACAAAGTCCATTGCTAAGTTTTTTTGACCACAGTGG AAGAACTTAAAATGGGTAAAGTAAGAAATGTTAAAAAGTCCCTGTTTTGTCCTGAAATTTTAGTCTATTCTGGGT AAATAGGATTTTCTGACACAGATATGAGAAGTTGTAGCTCTGATGTCTAGCTGTAGTCTCCTTGATCTGCTGATT GCATTATTTTAATTTGCTTTTCTGGGAAAGCAGTTTTGCTAAAAGCTGTACAGACTTTTTCTTTTGTACCTAGCA GTACTTTATATAGTATAGCTTTGGGCCATGTAGCATTTTAAGACTCAATTTTAAAAAAATTATTAATCTGTTGCTG ACTCTTAATTCCTATTTCAATATGTGTTTCCTTGAAGAATTCAGGATACAACTTCTTGTGTATGACAGCTTTCCT TCACACACTATTTTTGTGGGTGTGTATATATCTGATTTGGGAAGAATTTAAAAAAACACATAGCTTTTTAATTTGT TTGAAACAGACTTTCTGCCTGTTACATTTTTGCTTTTAACCAATTAAAGAAGCCAATGGCATTTTAGTTTTATAT TGTGTTTTCCACTAGTATATCCCTGTTGATTTGTTTGTGCCTTTTATTAACTGCCATTTTCTAAAATTTTTTTCA ATAAAAGGAAGGAAGATGTG

MHPFPESKPVLALCVISYFVMMGILTIYTSYKEKSIFLVAHRKDPTGMDPDDIWQLSSSLKRFDDKYTLKLTFIS GRTKQQREAEFTKSIAKFFDHSGTLVMDAYEPEISRLHDSLAIERKIK

CAGGGTCTCCTTGGCAGCTGTATTCTGGAGTCTGGATGTTGCTCTCTAAAGACCTTTAATAAAATTTTGTACAAA

MAVQISKKRKFVADGIFKAELNEFLTRELAEDGYSGVEVRVTPTRTEIIILATRTQNVLGEKGRRIRELTAVVQK RFGFPEGSVELYAEKVATRGLCAIAQAESLRYKLLGGLAVRRACYGVLRFIMESGAKGCEVVVSGKLRGQRAKSM KFVDGLMIHSGDPVNYYVDTAVRHVLLRQGVLGIKVKIMLPWDPTGKIGPKKPLPDHVSIVEPKDEILPTTPISE QKGGKPEPPAMPQPVPTA

Ì

GTCGCGGCTCGAGAGCGAGAGTCACGTCCCGGCGCTAGCCCAGCCCGACCCAGGCCCACCGTGGTGCACGCAAAC $\texttt{CACTTCCTGGCC} \underline{\textbf{ATG}} \texttt{CGCTCCTGCTTCTCAGCGCCTTCTGCCTCCTGGAGGCGGCCCTGGCCGCCGAGGTG}$ AAGAAACCTGCAGCCGCAGCAGCTCCTGGCACTGCGGAGAAGTTGAGCCCCAAGGCGGCCACGCTTGCCGAGCGC AGCGCCGGCCTGGCCTTCAGCTTGTACCAGGCCATGGCCAAGGACCAGGCAGTGGAGAACATCCTGGTGTCACCC GTGGTGGTGGCCTCGTCGCTGGGCTCGTGTCGCTGGGCGCAAGGCCAACGCCACGCCTCGCAGGCCAAGGCAGTG ACGGCGCGCAACGTGACCTGGAAGCTGGGCAGCCGACTGTACGGACCCAGCTCAGTGAGCTTCGCTGATGACTTC GTGCGCAGCAGCAGCACCACCACCTGCGAGCACTCCAAGATCAACTTCCGCGACAAGCGCAGGCCGCTGCAG TCCATCAACGAGTGGGCCGCAGACCACCGACGCCAAGCTGCCCGAGGTCACCAAGGACGTGGAGCGCACGGAC GGCGCCCTGTTAGTCAACGCCATGTTCTTCAAGCCACACTGGGATGAGAAATTCCACCACAAGATGGTGGACAAC GACGACGAGAAGGAAAAGCTGCAAATCGTGGAGATGCCCCTGGCCCACAAGCTCTCCAGCCTCATCATCCTCATG CCCCATCACGTGGAGCCTCTCGAGCGCCTTGAAAAGCTGCTAACCAAAGAGCAGCTGAAGATCTGGATGGGGAAG ATGCAGAAGAGGCTGTTGCCATCTCCTTGCCCAAGGGTGTGGTGGAGGTGACCCATGACCTGCAGAAACACCTG GCTGGGCTGGCCTGACTGACGCCATTGACAAGAACAAGGCCGACTTGTCACGCATGTCAGGCAAGAAGGACCTG TACCTGGCCAGCGTGTTCCACGCCACCGCCTTTGAGTTGGACACAGATGGCAACCCCTTTGACCAGGACATCTAC GGGCGCGAGGAGCTGCGCAGCCCCAAGCTGTTCTACGCCGACCACCCCTTCATCTTCCTAGTGCGGGACACCCAA AGCGGCTCCCTGCTATTCATTGGGCGCCTGGTCCGGCCTAAGGGTGACAAGATGCGAGACGAGTTA<u>TAG</u>GGCCTC AGGGTGCACACAGGATGGCAGGAGGCATCCAAAGGCTCCTGAGACACATGGGTGCTATTGGGGTTGGGGGGGAGG TGAGGTACCAGCCTTGGATACTCCATGGGGTGGGGGTGGAAAAGCAGACCGGGGTTCCCGTGTGCCTGAGCGGAC CTTCCCAGCTAGAATTCACTCCACTTGGACATGGGCCCCAGATACCATGATGCTGAGCCCGGAAACTCCACATCC ACACCTCAGCTGCCCCCAGCTCTATCCCAACCTCTCCCAACTATAAAACTAGGTGCTGCAGCCCCTGGGACCA GGCACCCCAGAATGACCTGGCCGCAGTGAGGCGGATTGAGAAGGAGCTCCCAGGAGGGGCTTCTGGGCAGACTC TGGTCAAGAAGCATCGTGTCTGGCGTTGTGGGGATGAACTTTTTGTTTTGTTTCTTCCTTTTTTAGTTCTTCAAA TAAAACTTTTCCAATGACATTT

MRSLLLLSAFCLLEAALAAEVKKPAAAAAPGTAEKLSPKAATLAERSAGLAFSLYQAMAKDQAVENILVSPVVVA
SSLGLVSLGGKATTASQAKAVLSAEQLRDEEVHAGLGELLRSLSNSTARNVTWKLGSRLYGPSSVSFADDFVRSS
KQHYNCEHSKINFRDKRRPLQSINEWAAQTTDGKLPEVTKDVERTDGALLVNAMFFKPHWDEKFHHKMVDNRGFM
VTRSYTVGVMMMHRTGLYNYYDDEKEKLQIVEMPLAHKLSSLIILMPHHVEPLERLEKLLTKEQLKIWMGKMQKK
AVAISLPKGVVEVTHDLQKHLAGLGLTEAIDKNKADLSRMSGKKDLYLASVFHATAFELDTDGNPFDQDIYGREE
LRSPKLFYADHPFIFLVRDTQSGSLLFIGRLVRPKGDKMRDEL

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TTGATTTGGTATAGTGGGAACATTTGCTTTGGAGACAGATGAACTGGATTCTGATCGTGACCCTGCTATTTTCTC CTTGTGTGACTTTGGAGCCATGAGACCCCAGATCCTGCTGCTCCTGGCCCTGCTGACCCTAGGCCTGGCTGCACA ACACCAAGACAAAGTGCCCTGTAAGATGGTGGACAAGAAGGTCTCGTGCCAGGTTCTGGGCCTGCTCCAGGTCCC GGCCCTGACCCACCTGGAGCACCTCAGCCTGGCTCACAACCGGCTGGCGATGGCCACTGCGCTGAGTGCTGGTGG CCTGGGCCCCCTGCCACGCGTGACCTCCCTGGACCTGTCTGGGAACAGCCTGTACAGCGGCCTGCTGGAGCGGCT GCTGGGGGAGGCACCCAGCCTGCATACCCTCTCACTGGCGGAGAACAGTCTGACTCGCCTCACCCGCCACACCTT CCGGGACATGCCTGCGCTGGAGCAGCTTGACCTGCATAGCAACGTGCTGATGGACATCGAGGATGGCGCCTTCGA GGGTCTGCCCCGCCTGACCCATCTCAACCTCTCCAGGAATTCCCTCACCTGCATCTCCGACTTCAGCCTCCAGCA GCTGCGGGTGCTAGACCTGAGCTGCAACAGCATCGAGGCCTTTCAGACGGCCTCCCAGCCCCAGGCTGAGTTCCA GCTCACCTGGCTTGACCTGCGGGAGAACAAACTGCTCCATTTCCCCGACCTGGCCGCGCTCCCGAGACTCATCTA CCTGAACTTGTCCAACAACCTCATCCGGCTCCCCACAGGGCCACCCCAGGACAGCAAGGGCATCCACGCACCTTC CGAGGGCTGGTCAGCCCTGCCCCTCTCAGCCCCAGCGGGAATGCCAGCGGCCGCCCCTTTCCCAGCTCTTGAA TCTGGATTTGAGCTACAATGAGATTGAGCTCATCCCCGACAGCTTTCTTGAGCACCTGACCTCCCTGTGCTTCCT CTTAAGCCACAATGCCCTGGAGACACTGGAACTGGGCGCCAGAGCCCTGGGGTCTCTGCGGACGCTGCTCCTACA GGGCAATGCCCTGCGGGACCTGCCCCCATACACCTTTGCCAATCTGGCCAGCCTGCAGCGGCTCAACCTGCAGGG GAACCGAGTCAGCCCTGTGGGGGGCCAGATGAGCCTGGCCCTCCGGCTGTGTGGCCTTCTCCGGCATCACCTC CCTCCGCAGCCTGAGCCTGGTGGATAATGAGATAGAGCTGCTCAGGGCCAGGGGCCTTCCTCCACACCCCACTGAC TGAGCTGGACCTTTCTTCCAATCCTGGGCTGGAGGTGGCCACGGGGGCCTTGGGAGGCCTGGAGGCCTCCTTGGA GGTCCTGGCACTGCAGGGCAACGGGCTGATGGTCCTGCAGGTGGACCTGCCCTGCTTCATCTGCCTCAAGCGGCT CAATCTTGCCGAGAACCGCCTGAGCCACCTTCCCGCCTGGACACAGGCTGTGTCACTGGAGGTGCTGGACCTGCG GGGGAATCCACTCAGCTGCTGCGGCAATGGCTGGCTGGCAGCCCAGCTGCACCAGGGCCGTGTGGACGTGGACGC CACCCAGGACCTGATCTGCCGCTTCAGCTCCCAGGAGGAGGTGTCCCTGAGCCACGTGCGTCCTGAGGACTGTGA GAAGGGGGGACTGAAGAACATCAACCTCATCATCCTCACCTTCATACTGGTCTCTGCCATCCTCCACCAC GCTGGCCGCCTGCTGCGTCCGCCGGCAGAAGTTTAACCAACAGTATAAAGCCTAAAGAAGCCGGGAGACACT AGAACTCTGGTCTCCAAATTACAGCCCAGGACACCTTTCTCTGCCGCCTGCTGCATCAGTGGGTGACCCCCTTCC CGGGCTGCACTTTGGGTCCAGCTGTGGAAGCCAGAAGTTGGGCGGTTTCAGGGACAGCCGAGAATAATGTTGACC TGTCAGATCAACAAATCTTCACTGAGCATGTATTTTGTGCCACACCCTGCTCTGGGCACTGGGAATGCTGGGAAA TGAGATACATTCCCGCCCTCAAGAATCTCCCAGTCTGGTAGGAGAGAGTGCTGCAGAGCCACGTGGCCGCCACGC AGTGTGCTTAGGGCCTGAGGTGTGAAAGCCCAGGGCTCCAGAGCTCGGCAGGCCCCGCTGGTTTGGTGCGGTGAG TCCTGCCCGGCTGTGCCAGGGTGAGGGAGGGCCAAGCCCAGGAGGATTTGTCTGAGACATTTCCAAGCAGACTG TTTGTCACGTCTTCTGAGAATGACTTTCAGTCTCTCTGAAAATGAAAAGCTTAGGACCAGAAGAGAGAAATTGGAG CTGTACGAGTGTGTCTCGGATCTGGTGTTGTTAGGTGGGCCACGGCGGCTCCAGCAGGGTCTGGTTAAGGGGTCC AGCCCAGCACTGGACCATTCCGTCTCCTGCTCTGGACTTGCCCTCTCCCTTCCTGGCACTCTCATGTTGCATACC CTGACCCCAGTGCTCTAAGCACCGTCCCTGCCCAGCCCCACTTCTCCATCGCAGCCCCACCTTGGCTGA GCCAGGAGCTAAAACCTTAGATATCTGGTTCTGTTTTGCACCCAGCTTGGCAGATGTGGATTTGAATCCAAGCCT TGTGTCTGCCCCTATGTGACAGCTCTATATTTTATCCCCGTTTTATAAAAGAGGAAACTGAAGTTCTGAAAATCT $\verb|CCTTCCAGGGCCCCAGCTAACTAATGCCATAGGTGAGATTCAAACCTTCATCCTTCTGTCTCCAGGGCCTGATCT|\\$ TTACCACTGCAGGGGCTGCAGGCCGTTAAGTGGACAGGAAGTGGCCCCACATAGCCCGAGCAGGGTCTGGAAGCA TTTCCCTCCTCCTTCCTTTCCACCCTGGTGTGGGTTCTCCTGTTCTCTCTGTGCTCTTGCATTCTCATTCCC TTTTCCTCTATTGAGCAGAGCCTGGAGTTTGAGACTATGGAATCCAACCTCCCCATTGCACAGATGGGGAAACTG AGGCTTAGGAAGAATGAAACTTGTGGAGAGCTTATACAGAGCCTCTGGGGGAAAAAAAGAGCCCTTATTTGTGG GGTGAGATTGGGGGTTGGACCAGAGTGATGTCCTCTCTCAGCTATCACATCACAAGATAATGCTGGCTCCAAACT

3619/6881 FIGURE 3335B

TCCTTTCTGTGCCTCATCATGCAAGGATCTTTTTTCCCTCTTACAAAAACAGGTAAAAAGCCTCACCCAGATGAC
CCCCATCCCTCATACCATGGAGTCATGAGCTGTCTGGGAAGAATGGACGTGCTGGGACCAACTCAAGACCTTGTT
TTGCTGTCTTCATCATCTTACCTGTGCTTGGCCCACAGTCTGGCTCATGATGTGGGCTCAGTAATGTGCGAGAAA
GTGAAAATGCCACTCTCTCCACCCCATTTTACAGAGGAGAACACCAAGGCCCAGAGGAAGTTAAGGGAGAGTCAA
TGGGCAGAGCCAGGGCTAGGCCCTGGTGGTGTGTGGAGCACCCAGGCAGACCCAGTCCTGGTTGGGATCACACCC
ACGGGTGCTACTGCACGTAACACTCCTCCTTAGGCCTGGAGGCCAAGGTGTGGGTCCCCACGCCTGATCTTTGAA
AACACTACACAGGGCTGCTGTCACTTCCCAGGGCCCAGGCCTCAGCCCAGGCCTCGGGACCAACTCTTTGTATAA
CCTACCTGAATGTATTAAAAACTAATTTTGG

ATGGATAGAATGGTGCTATCTGAGCTGTTATAATGTTGGCCTCATGCCTAGCTTTATATTGCAGCACGTCTGAGG CATTGGTTTTCATCCTTCCAAACTTTTGGTCTACAGAGACTATTAGAAGATTAAGTAGCTGCTGCTGGTGGTGA CAATGTCAAATAACGGCCTAGACATTCAAGACAAACCCCCAGCCCCTCCGATGAGAAATACCAGCACTATGATTG GAGCCGGCAGCAAAGATGCTGGAACCCTAAACCATGGTTCTAAACCTCTGCCTCCAAACCCAGAGGAGAAAAAA TTTCTCTCCCTTCAGATTTTGAACACACAATTCATGTCGGTTTTGATGCTGTCACAGGGGAGTTTACGGGAATGC CAGAGCAGTGGGCCCGCTTGCTTCAGACATCAAATATCACTAAGTCGGAGCAGAAGAAAAACCCGCAGGCTGTTC TGGATGTGTTGGAGTTTTACAACTCGAAGAAGACATCCAACAGCCAGAAATACATGAGCTTTACAGATAAGTCAG CTGAGGATTACAATTCTTCTAATGCCTTGAATGTGAAGGCTGTGTCTGAGACTCCTGCAGTGCCACCAGTTTCAG AAGATGAGGATGATGATGATGATGCTACCCCACCACCAGTGATTGCTCCACGCCCAGAGCACAAAATCTG TATACACACGGTCTGTGATTGAACCACTTCCTGTCACTCCAACTCGGGACGTGGCTACATCTCCCATTTCACCTA CTGAAAATAACACCACTCCACCAGATGCTTTGACCCGGAATACTGAGAAGCAGAAGAAGAAGAAGCCTAAAATGTCTG ATGAGGAGATCTTGGAGAAATTACGAAGCATAGTGAGTGTGGGCGATCCTAAGAAGAAATATACACGGTTTGAGA AGATTGGACAAGGTGCTTCAGGCACCGTGTACACAGCAATGGATGTGGCCACAGGACAGGAGGTGGCCATTAAGC AGATGAATCTTCAGCAGCAGCCCAAGAAAGAGCTGATTATTAATGAGATCCTGGTCATGAGGGAAAACAAGAACC CAAACATTGTGAATTACTTGGACAGTTACCTCGTGGGAGATGAGCTGTGGGTTGTTATGGAATACTTGGCTGGAG GCTCCTTGACAGATGTGGTGACAGAAACTTGCATGGATGAAGGCCAAATTGCAGCTGTGTGCCGTGAGTGTCTGC AGGCTCTGGAGTTCTTGCATTCGAACCAGGTCATTCACAGAGACATCAAGAGTGACAATATTCTGTTGGGAATGG ATGGCTCTGTCAAGCTAACTGACTTTGGATTCTGTGCACAGATAACCCCAGAGCAGAGCAAACGGAGCACCATGG TAGGAACCCCATACTGGATGGCACCAGAGGTTGTGACACGAAAGGCCTATGGGCCCAAGGTTGACATCTGGTCCC TCATTGCCACCAATGGGACCCCAGAACTTCAGAACCCAGAGAAGCTGTCAGCTATCTTCCGGGACTTTCTGAACC GCTGTCTCGAGATGGATGTGGAGAAGAGAGGTTCAGCTAAAGAGCTGCTACAGGTGAGAAAACTGAGGTTTCAAG TGTTTAGTAACTTTTCCATGATAGCTGCATCAATTCCTGAAGATTGCCAAGCCCCTCTCCAGCCTCACTCCACTG ATTGCTGCAGCTAAGGAGGCAACAAGAACAATCACTAAAACCACACTCACCCCAGCCTCATTGTGCCAAGCCTT $\tt CTGTGAGATAAATGCACATTTCAGAAATTCCAACTCCTGATGCCCTCTTCTCCTTGCCTTGCTTCTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTTCATTTCATTTCATTTCATTTCATTCATTTCATTTCATTCATTTCATTTC$ TGATCTAGCACTCCTCAAGACTTTGATCCTTGGAAACCGTGTGTCCAGCATTGAAGAGAACTGCAACTGAATG

GTTAGATGGCTCTGGATTAGGATTCTCACTGGAATACCCCACCATTAGTTTACATGCATTATCCAGGGACCGAAG TGACTGTCTAGGAGAGCATTTGTATGTTATGGTGAATGCCAAATTTGAAGAAGAATCAAAAGAACCTGTTGCTGA TGAAGAAGAGAAGACAGTGATGATGTTGAACCTATTACTGAATTTAGATTTGTGCCTAGTGATAAATCAGC GTTGGAGGCAATGTTCACTGCAATGTGCGAATGCCAGGCCTTGCATCCAGATCCTGAGGATGAGGATTCAGATGA ${\tt AGAAGGATTATCCCATCTAACAGCAGAAGGCCAAGCCACACTGGAGAGATTAGAAGGAATGCTTTCTCAGTCTGT}$ ${\tt TACCACCAACAGTTGCTGGACAGTTTGAGGATGCAGATGTTGATCAC} {\tt TGA}{\tt AAATGATTTATGCAAGTTTAAGA$ TTCTGCTCCTAAGTGTAGGAGAACTTGGTGCCTCTTCCACTCTGGAGTGAAGTTAATGAAAGTCTTTTTCCTT AACTTTCTGTGTCTGGGTACCCTCTGAGTAGGCCTATAATTCCTACCTTGACTGTGTGCATCATTTGTAAGCTAG ${\tt ACCAGTCTGCTGTTATAACCTCTTAGGTTGTATCCTTTAATTTCCAGCCTTTTAGGTTAGTTTCTGTAACAGAAC}$ ${\tt AAGTGAGTCTGGGATGAAGTCCTCAAAGTACTTCAAATGGTAATTGTTTTTGTTAATAGCTTAACAAATAA}$ ACCTAGGTTTTCTATAAA

MSFLKSFPPPGPAEGLLRQQPDTEAVLNGKGLGTGTLYIAESRLSWLDGSGLGFSLEYPTISLHALSRDRSDCLG EHLYVMVNAKFEEESKEPVADEEEEDSDDDVEPITEFRFVPSDKSALEAMFTAMCECQALHPDPEDEDSDDYDGE EYDVEAHEQGQGDIPTFYTYEEGLSHLTAEGQATLERLEGMLSQSVSSQYNMAGVRTEDSIRDYEDGMEVDTTPT VAGQFEDADVDH

MTTASTSQVRQNYHQDSEAAINRQINLELYASYVYLSMSYYFDRDDVALKNFAKYFLHQSHEEREHAEKLMKLQN QRGGRIFLQDIKKPDCDDWESGLNAMECALHLEKNVNQSLLELHKLATDKNDPHLCDFIETHYLNEQVKAIKELG DHVTNLRKMGAPESGLAEYLFDKHTLGDSDNES

3626/6881 FIGURE 3342A

ATCAGCGGCGGCGGCGACGTGGTGCACCGGCTGGCTGAGGAAATCGCCTCCCGAGAAGAAGTTGAGGCGCTAT GCCTGGAAGAAACGCTGGTTTATCCTGCGGAGTGGCCGGATGAGCGGTGACCCAGATGTTCTGGAATACTACAAG AACGATCACTCCAAGAAGCCTCTGCGGATCATCAACCTGAACTTCTGTGAGCAGGTAGATGCAGGCCTGACCTTT AACAAGAAGGAGCTGCAGGATAGTTTTGTGTTTGACATCAAGACCAGTGAACGCACCTTTTACCTGGTGGCTGAG ACAGAAGAGGACATGAATAAGTGGGTCCAGAGCATCTGCCAGATCTGTGGCTTCAATCAGGCTGAGGAGAGCACA GACTCCCTGAGAAATGTTTCCTCAGCCGGTCATGGCCCCCGCTCTTCTCCAGCTGAGCTCAGCAGCTCTAGCCAG GTGTCAAACCACATGCAGCCCACCTTGTCCACCAGCGCACCTCAGGAGTATCTCTACTTGCACCAGTGCATAAGC CGAAGAGCAGAAAATGCAAGGAGTGCCAGCTTCTCTCAGGGCACCAGAGCCTCTTTTCTCATGAGGAGTGACACA GCTGTACAAAAACTTGCCCAGGGCAATGGACACTGTGTCAACGGGATCAGTGGTCAAGTCCATGGCTTCTATAGC CTTCCCAAGCCGAGCCGGCACAATACAGAATTCAGAGACAGTACCTACGACCTCCCCGGCAGCCTGGCCTCCCAT GGCCACACCAAGGGCAGCCTCACAGGCTCCGAGACAGATAATGAGGATGTGTACACCTTCAAGACGCCCAGCAAC ACCCTGTGCAGGGAGTTCGGGGACCTCCTGGTAGACAATATGGATGTTCCGGCCACCCCACTCTCAGCCTACCAG ATCCCTAGGACATTCACTCTGGACAAAAACCACAATGCCATGACAGTGGCCACTCCTGGGGGACTCAGCCATAGCT CCCCCACCCGCCCCCCAAGCCAAGTCAGGCAGAAACACCTCGATGGGGCAGTCCTCAGCAGAGACCGCCAATC CACCGAGCTTCTTCCTGTGAGACCTACGAGTACCCACAGCGTGGTGGAGAGAGTGCAGGCCGGTCTGCTGAATCC ATGAGTGATGGAGTTGGCTCTTTCCTGCCAGGGAAAATGATTGTGGGCCGATCGGACAGCACCAATTCTGAAGAC AACTATGTGCCCATGAATCCAGGTTCTTCCACCCTGTTGGCCATGGAACGAGCAGGTGATAATTCCCAGAGCGTC TACATCCCAATGAGCCCAGGGGCCCATCACTTTGACTCACTTGGCTACCCATCAACAACCCTTCCTGTGCACCGA GGCCCCAGCAGAGGAAGTGAGATTCAGCCACCCCTGTCAACCGCAACCTCAAACCTGATCGGAAAGCAAAGCCA ACACCACTTGACCTGAGGAACAACACCGTCATCGATGAACTCCCCTTCAAGTCACCTATCACCAAGTCTTGGTCT AGGGCCAACCACACCTTCAACTCCAGCTCCTCCCAGTACTGCCGCCCCATCTCCACCCAGAGCATCACCAGCACA GACTCAGGAGACAGCGAAGAGAACTATGTCCCTATGCAAAACCCAGTGTCTGCATCTCCCGTTCCCAGTGGCACG AACAGTCCTGCCCCTAAGAAGAGCACCGGCAGCGTTGATTATCTGGCCCTGGACTTCCAGCCGAGCTCCCCAAGC CCCCACCGCAAGCCATCTACTTCATCCGTCACCTCTGATGAGAAGGTGGACTACGTTCAGGTGGACAAGGAGAAG ACCCAGGCCCTGCAGAACACCATGCAGGAGTGGACAGACGTGCGGCAGTCCTCAGAGCCTTCCAAGGGTGCCAAG TCTCCCGTTCTTCCTCCCATCCACCTCCTCTACTCTGCCAGTCTCAGCCTTCAAAGCACTTGACATCAGGGAC CCTGAACCCTTCCCCTGGGAGGTGAGGGCCTGATCAAGGCACCTCCTCTGCCCACTCGGGGCCCAGCTGTGATTT TTATCAGTAATGGCCATGCCTCCACCCACCTTAGTTAGGAGCTACTTCCAAAAAGCATCCTTCAGCCTCTTCCTG TCCTTTAGACCTGACTCTCTACCAGATGTTTGGAGGGAAGGGCTGGGGCTCTGAGCCAGATTCCACACCTCACGT TCAGTCACAGCCCTCAGCTATCTTCCCTCCGGCCACTGGGCTACCTCTCCTTCAGTCCCAGAAGACAAGTCTCAC CAACCCAGGGAGTCAAGGACCAGCAAACCAAAGTGGATAATGGACTTTTTCATTCCTGTTTTTCTTGGCAGGAGA GAAGCAAGGCCACTAAAAGAGGAGATGGTGGAGACGGAGGCTCAGCAGTGGTCTTGAGGGGTAAAGGACTTAGAT GCCCAGATGAAGAGGGAAAGCTGACATCTGCAGGGAACCCACTTTGAGGCTGAGGCCATGGCAGGACAGCTGCTG GCTTGGAGCTCGGGTGGTGGAGATGACAAGGACACTGTGGGGTCTCGGGTCCCCAGAACTCTGGAGCTACAGGCCA CTCTAGGCCCAAGGGCTAGTCCTCTTCCCCAGTCCCCTCAGAGGCCCCCGCCAGCCCCACCTTGAAAGCAGCATA ${\tt CAGGGGAAGGCTTGGACCAAGCTGGGCGACCAAGCACATGGGAACACATGGTAAAGGGGTGGGGAATATG}$ GGAGGGAGTGTGGGTGGGGGGTGATGCAGGGACTGAGGGGAACCCTGGGACAGGCAGAGGCAGAGG CACAGGGCAGTGCAGGGGACTCTGCAGTGGGGTCGGGAAGTGAGTTTCTTTGCAGTGAGCAGTGCAGTGGAAGTC GGGCACAGAGGTAGCAGACAGATGTGAAGCAGTGGTGAAGGCCATGTAGCAAGTGGGGAAATACATCCAAAGGGC CTGGGAGTTGGGGGGTGCCCAACGCAATCCTTGGGGGTGCAGGGGGGACAGAAAGTGAAGGAGGACACGTGCA AGCAGGGCAGAATGATGCCTAGAGGACCACATCAGGCATGGCTGACAGCTTGTGCCCATGGGCTGTGGCGTATGT CAGATCGCAGGGTAGGAACGAGTCTGGCCTGGTGCCGGCCCAGTGTTTCCTCAGCTCATCCGCCCTCTGTTGCTC CCTAGCATTCCAGGAGCCATCTTGGACTCTCCCCCAGGTTTGAAAGGCCATCAGATTAGCAGGGACGGGGTGT

3627/6881 FIGURE 3342B

AGGGCATCACCCAAGGTTCCTTCTCTTAAACTAAGGGTGGGGGATCTGAATGTTTTTATGTTGACTGTTCTTGAC TAAATTTTCAAGAGTTTCAGAAGCAACAGGACAGACCAGACGTTTCATTCTACCCTGGGGCGAACAGAACTTCTT CCTCCCAAÁCAATGACTTCCTGCCATGTTTGATGGGGACAGCTACCACTGTCCTCTGCCCCCATTCCCCTTTCAG CTCCCATGAGCATGCATAGTTCACCAGACCAATGGCCTAGCCATTCTCTAAGTCCCATCCTGGAAGAAGTTATTT ${\tt AGTACTTAGGGAGGTIGGTGTCAGAGGCAGGGAGGTGGGATCAGGGAAGGTGGATTCTAGGAAAAGGGAGTGCCT}$ GAGGTAGGCCTTAGAAGGGGATGAGTCAGATTTTTACAGAGGAGGAGGGCAGGGCTTGGGTCCAGTGGAGGAAGA AGGAAGGAGAGGCTTGGAAAGCCTTGTGTCTTGGGAAAAAAAGGCCTTTGAGCATATGGGTCCAGCCACTCAGAA GTGCAGGGGCCATGCCTTGGTGTTCCAATAAGTGAATGGAAGCAGTGGTGGTAGCTACACTGGGCAGAGTTGGCA GGGTGCTGGTTCACTCTGCCCAGCCCTGAATGTGTGCCTTAAAGGCCCCCTACAAGGGGCCCCCATACGACAGAGC TTTTAACTGGTGCCTTCCCTGTACCCGCAGCAGCCACAAGTGGGCCCAGACTATTGCAGCCTCCCATAAACATGT GGTAACTACCAAAATCCCTCGGGTGCAAGTGTAGGGGTAGAGATGGAAGGATGAGAGGTGAAATTGACCTTTTGA TCCAACAAAGGAGTCAACTCAGTTGAAAAAACTGGTCCTTTGGCCTATCCATGGGTCAAAGTCCACCTCTCCTGG GGGCCTGGAGAGGACTGAGCCTACGGAAAGGGGATACCTTCCCACTCAGCACTGCTTCACACAGGCCCCCTGCCT GGGGCTCTCCAAGGAGCCTTCTTCACCCACTTCCAGCTCCACTTCTGCAAGGTTAAGTCAAGTGAGAACGATGAG GGTGGGCAGTACCTATCCCCAGTCCCCTCCTAGCTTGACTTTAGTGGTTTCCAATGTAGAAGTTAACAAAGTATG ATAAAATGCAGGGGAAGCCAGACTGGTCTCAGGAGCGCTAAAGCCCTTCCGTGGGGGGTCGTCTTTCTGGGACTA GCCCTGCTGTTTAGGACCTGGGACCACAATGGGGTACCTGCCGAGGGGGTCCCCAAGAGATCCAGGCTGTCATGT GATTTATGGTGGCATGTGTTGTTTTTTTTGGCTACTTGTGTCTTGAAATCTAGAATTATTTCACGCAGAATTG TCACTGTTTGTCAGGAAGAGAAAATGGGCTAGTGGAAGCCCAGTCTTGAGTTCTTGTCTTGTTACCATTTAAAAT TAAATTGTAACATATTTATCCGGTGGGTGGGACAGGAGTGTGTTCAAGTGGGTCATGTTTTTGCTGTGGTGACAC ATGGTACAGGCTTGGAGCTTGCAGGTCCCTTTCTACTGTGGTGTTGGAGCAGGACAATAAAGTCCACTAGAAATG CACCCCA

MSGGGDVVCTGWLRKSPPEKKLRRYAWKKRWFILRSGRMSGDPDVLEYYKNDHSKKPLRIINLNFCEQVDAGLTF
NKKELQDSFVFDIKTSERTFYLVAETEEDMNKWVQSICQICGFNQAEESTDSLRNVSSAGHGPRSSPAELSSSSQ
HLLRERKSSAPSHSSQPTLFTFEPPVSNHMQPTLSTSAPQEYLYLHQCISRRAENARSASFSQGTRASFLMRSDT
AVQKLAQGNGHCVNGISGQVHGFYSLPKPSRHNTEFRDSTYDLPRSLASHGHTKGSLTGSETDNEDVYTFKTPSN
TLCREFGDLLVDNMDVPATPLSAYQIPRTFTLDKNHNAMTVATPGDSAIAPPPRPPKPSQAETPRWGSPQQRPPI
SENSRSVAATIPRRNTLPAMDNSRLHRASSCETYEYPQRGGESAGRSAESMSDGVGSFLPGKMIVGRSDSTNSED
NYVPMNPGSSTLLAMERAGDNSQSVYIPMSPGAHHFDSLGYPSTTLPVHRGPSRGSEIQPPPVNRNLKPDRKAKP
TPLDLRNNTVIDELPFKSPITKSWSRANHTFNSSSSQYCRPISTQSITSTDSGDSEENYVPMQNPVSASPVPSGT
NSPAPKKSTGSVDYLALDFQPSSPSPHRKPSTSSVTSDEKVDYVQVDKEKTQALQNTMQEWTDVRQSSEPSKGAK

3629/6881 FIGURE 3344A

GAAATTTTGAGAAGTGGTGGGATGAAGAAGATCCCTGAAGAGAGGAGTAACTGAGACAAAGGCGAGGCTAGCAAT AGAGAGACAAGTGAGGGAATTAGACCTTTGGTATCATCATGAAAAGGCCTGGAAGAAACGCTGGTTTATCCTGCG GAGTGGCCGGATGAGCGGTGACCCAGATGTTCTGGAATACTACAAGAACGATCACTCCAAGAAGCCTCTGCGGAT CATCAACCTGAACTTCTGTGAGCAGGTAGATGCAGGCCTGACCTTTAACAAGAAGGAGCTGCAGGATAGTTTTGT GTTTGACATCAAGACCAGTGAACGCACCTTTTACCTGGTGGCTGAGACAGAAGAGGACATGAATAAGTGGGTCCA GAGCATCTGCCAGATCTGTGGCTTCAATCAGGCTGAGGAGAGCACAGACTCCCTGAGAAATGTTTCCTCAGCCGG TCATGGCCCCCGCTCTTCTCCAGCTGAGCTCAGCAGCTCTAGCCAGCACCTTCTCCGAGAGCGCAAGTCCTCAGC CCCATCACACTCCAGCCAGCCAACTCTGTTCACGTTTGAACCCCCTGTGTCAAACCACATGCAGCCCACCTTGTC CACCAGCGCACCTCAGGAGTATCTCTACTTGCACCAGTGCATAAGCCGAAGAGCAGAAAATGCAAGGAGTGCCAG CTTCTCTCAGGGCACCAGAGCCTCTTTTCTCATGAGGAGTGACACAGCTGTACAAAAACTTGCCCAGGGCAATGG ${\tt ACACTGTGTCAACGGGATCAGTGGTCAAGTCCATGGCTTCTATAGCCTTCCCAAGCCGAGCCGGCACAATACAGA}$ ATTCAGAGACAGTACCTACGACCTCCCCGCAGCCTGGCCTCCCATGGCCACCCAAGGGCAGCCTCACAGGCTC CGAGACAGATAATGAGGATGTGTACACCTTCAAGACGCCCAGCAACACCCTGTGCAGGGAGTTCGGGGACCTCCT GGTAGACAATATGGATGTTCCGGCCACCCCACTCTCAGCCTACCAGATCCCTAGGACATTCACTCTGGACAAAAA CCACAATGCCATGACAGTGGCCACTCCTGGGGACTCAGCCATAGCTCCCCCACCCCGCCCCCCAAGCCAAGTCA GGCAGAAACACCTCGATGGGGCAGTCCTCAGCAGAGACCGCCAATCAGTGAAAATAGCAGATCTGTCGCTGCCAC CATCCCCAGACGCAACACCCTCCCTGCAATGGACAACAGCCGACTTCACCGAGCTTCTTCCTGTGAGACCTACGA GTACCCACAGCGTGGTGGAGAGAGTGCAGGCCGGTCTGCTGAATCCATGAGTGATGGAGTTGGCTCTTTCCTGCC ${\tt AGGGAAAATGATTGTGGGCCGATCGGACAGCACCAATTCTGAAGACAACTATGTGCCCATGAATCCAGGTTCTTC}$ CACCCTGTTGGCCATGGAACGAGCAGGTGATAATTCCCAGAGCGTCTACATCCCAATGAGCCCAGGGGCCCATCA $\tt CTTTGACTCACTTGGCTACCCATCAACAACCCTTCCTGTGCACCGAGGCCCCAGCAGGAGGAAGTGAGATTCAGCC$ ACCCCCTGTCAACCGCAACCTCAAACCTGATCGGAAAGCAAAGCCAACACCACTTGACCTGAGGAACAACACCGT CATCGATGAACTCCCCTTCAAGTCACCTATCACCAAGTCTTGGTCTAGGGCCAACCACCTTCAACTCCAGCTC CTCCCAGTACTGCCGCCCCATCTCCACCCAGAGCATCACCAGCACAGACTCAGGAGACAGCGAAGAGAACTATGT CCCTATGCAAAACCCAGTGTCTGCATCTCCCGTTCCCAGTGGCACGAACAGTCCTGCCCCTAAGAAGAGCACCGG ${\tt CAGCGTTGATTATCTGGCCCTGGACTTCCAGCCGAGCTCCCCAAGCCCCCACCGCAAGCCATCTACTTCATCCGT}$ CACCTCTGATGAGAAGGTGGACTACGTTCAGGTGGACAAGGAGAAGACCCAGGCCCTGCAGAACACCATGCAGGA $\tt GTGGACAGACGTGCGGCAGTCCTCAGAGCCTTCCAAGGGTGCCAAGCTG\underline{TGA}TGAGAGGGCCACCGCAGAGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCAAGGCCAAGGCCCAAGGCCCAAGGCCAAGGCCAAGGCCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCCAAGGCCCAAGGCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCCAAGGCCCAAGGCCCAAG$ GGAGGCAGCATCTCCAGAGCTGGCCCTTCCCATCTCCCCTCTCCCCTTCTCCGTTCTTCCTCCCATCCACCTCCT CTTAGTTAGGAGCTACTTCCAAAAAGCATCCTTCAGCCTCTTCCTGTCCTTTAGACCTGACTCTCTACCAGATGT TTGGAGGGAAGGGCTGGGGCTCTGAGCCAGATTCCACACCTCACGTTCAGTCACAGCCCTCAGCTATCTTCCCTC AAAGTGGATAATGGACTTTTTCATTCCTGTTTTTCTTGGCAGGAGAAGCAAGGCCACTAAAAAGAGGAGATGGT GGAGACGGAGGCTCAGCAGTGGTCTTGAGGGGTAAAGGACTTAGATGCCCAGATGAAGAGGGGAAAGCTGACATCT GCAGGGAACCCACTTTGAGGCTGAGGCCATGGCAGGACAGCTGCTGTGGGGTGCAGAGGCAGAAGATGAAGGACA AAAGGAAGGGAAAACTGATGGCCAACCTAGAGCAGCAAGGAGCAGGGCTTGGAGCTCGGGTGGAGATGACAA GGACACTGTGGGGTCTGGGTCCCCAGAACTCTGGAGCTACAGGCCACTCTAGGCCCAAGGGCTAGTCCTCTTCCC CAGTCCCTCAGAGGCCCCCGCCAGCCCACCTTGAAAGCAGCATACAGGGGAAGGCTTGGACCAAGCTGGGCGA GCAGGGACTGAGGGGAACCCTGGGACAGGCACAGGCTGGGCAGAGGCACAGGGCAGTGCAGGGACTCTGCAGTG CATCAGGCATGGCTGACAGCTTGTGCCCATGGGCTGTGGCGTATGTCAGATCGCAGGGTAGGAACGAGTCTGGCC TGGTGCCGGCCCAGTGTTTCCTCAGCTCATCCGCCCTCTGTTGCTCCCTAGCATTCCAGGAGCCATCTTGGACTC

3630/6881 FIGURE 3344B

TCCTCCCCAGGTTTGAAAGGCCATCAGATTAGCAGGGACGGGGTGTAGGGCATCACCCAAGGTTCCTTCTCTAA ACTAAGGGTGGGGGATCTGAATGTTTTTATGTTGACTGTTCTTGACTAAATTTTCAAGAGTTTCAGAAGCAACAG GACAGACCAGACGTTTCATTCTACCCTGGGGCGAACAGAACTTCTTCCTCCCAAACAATGACTTCCTGCCATGTT CAATGGCCTAGCCATTCTCTAAGTCCCATCCTGGAAGAAGTTATTTCTTCAAGAGCTGCACCTCTCCTAGCA TTAGTTTAGATCAACTCAAGGAGTATTTATTAATGGCTGCTGTCTCCAGTTTCTGGGGTTAAGCACTAAGGACAC AAGAATCAATCAGACCTTCTCCCTGAACTTAAGATAGCCACAATCAGAAAAAGGACAAGGACATGAGACAGTGGT GATGGCCATCAGACAGAGACTTCAAATGCTGATGGAGGGCAGAGGAAGTACTTAGGGAGGTTGGTGTCAGAGGCA GGAGTGGGGGATCAGGGAAGGTGGATTCTAGGAAAAGGGAGTGCCTGAGGTAGGCCTTAGAAGGGGATGAGTCAG CTTGGGAAAAAAAGGCCTTTGAGCATATGGGTCCAGCCACTCAGAAGTGCAGGGGCCATGCCTTGGTGTTCCAAT AAGTGAATGGAAGCAGTGGTAGCTACACTGGGCAGAGTTGGCAGGGTGCTGGTTCACTCTGCCCAGCCCTGA ATGTGTGCCTTAAAGGCCCCCTACAAGGGGCCCCATACGACAGAGCTTTTAACTGGTGCCTTCCCTGTACCCGCA GCAGCCACAAGTGGGCCCAGACTATTGCAGCCTCCCATAAACATGTGAGCATGTTCTGAGTGTGCCATGATGTGA CCTATTCTGGTAACTACCAGGAGGCTTCCTTCCAGCCCCCTATTCTGGTAACTACCAAAATCCCTCGGGTGCAAG TGTAGGGGTAGAGGATGAAGGATGAGAGGTGAAATTGACCTTTTGAAAGCAAAGCTCTGGCTCACAGGCCCCAAA CTACCAGCCGTATCTAGCATATCCCCACCCTCCACCCACTACCTCCCAACAAAGGAGTCAACTCAGTTGAAAA AACTGGTCCTTTGGCCTATCCATGGGTCAAAGTCCACCTCTCCTGGGGGCCTGGAGAGGACTGAGCCTACGGAAA CTTCCAGCTCCACTTCTGCAAGGTTAAGTCAAGTGAGAACGATGAGAAATAGGGAGATGGTGTCTCCTTAAGTCC TTGATCTGCCTGTCTGTGGAATGGGAGGTTGGATTAGCTGCGCTGAGGTCCCATCCACAGCTGGTGCTCAGCTGC TTGAAGGGGAGACTCCCTCCTGTAACTTCTTTCTGGGGGATTGGGGTGGGCAGTACCTATCCCCAGTCCCCTC CTAGCTTGACTTTAGTGGTTTCCAATGTAGAAGTTAACAAAGTATGCCCCATTCCTGTGACAAAAGCACAACCAT ACCCCTATCCCATTTCCAGAGTTCTTCCCTTCCCCATCTGGGCCTTCATAAAATGCAGGGGAAGCCAGACTGGTCT ${\tt CAGGAGCGCTAAAGCCCTTCCGTGGGGGGTCGTCTTTCTGGGACTAGCCCTGCTGTTTAGGACCTGGGACCACAA}$ TGGGGTACCTGCCGAGGGGTCCCCAAGAGATCCAGGCTGTCATGTGATTTATGGTGGCATGTGTTATTTG TTGGCTACTTGTGTCTTGAAATCTAGAATTATTTCACGCAGAATTGTCACTGTTTGTCAGGAAGAGAAAATGGGC TAGTGGAAGCCCAGTCTTGAGTTCTTGTCTTGTTACCATTTAAAATTGACATTTAATTTTCAAATCACTGTTGGT GGACAGGAGTGTGTTCAAGTGGGTCATGTTTTTGCTGTGGTGACACATGGTACAGGCTTGGAGCTTGCAGGTCCC TTTCTACTGTGGTGTTGGAGCAGGACAATAAAGTCCACTAGAAATGCACCCCA

MSGDPDVLEYYKNDHSKKPLRIINLNFCEQVDAGLTFNKKELQDSFVFDIKTSERTFYLVAETEEDMNKWVQSIC QICGFNQAEESTDSLRNVSSAGHGPRSSPAELSSSSQHLLRERKSSAPSHSSQPTLFTFEPPVSNHMQPTLSTSA PQEYLYLHQCISRRAENARSASFSQGTRASFLMRSDTAVQKLAQGNGHCVNGISGQVHGFYSLPKPSRHNTEFRD STYDLPRSLASHGHTKGSLTGSETDNEDVYTFKTPSNTLCREFGDLLVDNMDVPATPLSAYQIPRTFTLDKNHNA MTVATPGDSAIAPPPRPPKPSQAETPRWGSPQQRPPISENSRSVAATIPRRNTLPAMDNSRLHRASSCETYEYPQ RGGESAGRSAESMSDGVGSFLPGKMIVGRSDSTNSEDNYVPMNPGSSTLLAMERAGDNSQSVYIPMSPGAHHFDS LGYPSTTLPVHRGPSRGSEIQPPPVNRNLKPDRKAKPTPLDLRNNTVIDELPFKSPITKSWSRANHTFNSSSSQY CRPISTQSITSTDSGDSEENYVPMQNPVSASPVPSGTNSPAPKKSTGSVDYLALDFQPSSPSPHRKPSTSSVTSD EKVDYVQVDKEKTQALQNTMQEWTDVRQSSEPSKGAKL

TTTAACCATTCTAACTTTGCCTTGGGATATTGAAAATTCTGAATCAGTGAGGTATCTAAATAATTTATATTTTCA CTACTCTAAGACACCTCAACAACCAGAACAGTTTTATTATTGAGTTGTGTACAAAAATCTTGACTGTCCAGATGAA ATAGTTTTTCAGCCTGCAGTGTTTAGTGATATATCTCAAGGAGATGAACCAATAAAGTACAGACTTTGTGGTCT GAAGCTCTGTTGTGAAAAAATAAGCTAAACCAATTCACACTGACAGTATAATTTGATTCAAGTGCAGCTCCAGTT CAATAAAACTAATGTTTTTAAAATTAACTTTGTTTTGTATTTGGTTCAACTCCTTGCTAGTTCTCTCTATAT AATTTATAAAAACTGCATGTTGCTAATCTCATGATCCTGTGCATGTGGACTACTCTGCCTTTAACTTTTTTACAA AAACATGTTTGTTCATAGATTAAATAAAAGTATGTTTTCAACTTAATGTCTAATGTTTTCTGACAATTGTAAGAA TAATTTTGAAATGGAAATGCTGCTGTTTAGTTTCCACAGTGCCTACACAACCTGATAATCCATTTTCTCACCCTG ACAAACTCAAAAGGATGAGCAAGTCTGTTCCAGCATTTCTCCAAGATGAGAGTGATGACAGAAAACAGATACAG CATCAGAAAGCAGTTACCAGCTCAGCAGACACAAGAAGAGCCCGAGCTCTTTAACCAATCTTAGCAGCTCCTCTG GCATGACGTCCTTGTCTCTGTGAGTGGCAGTGTGATGAGTGTTTATAGTGGAGACTTTGGCAATCTGGAAGTTA AAGGAAATATTCAGTTTGCAATTGAATATGTGGAGTCACTGAAGGAGTTGCATGTTTTTGTGGCCCAGTGTAAGG ACTTAGCAGCAGCGGATGTAAAAAACAGCGTTCAGACCCATATGTAAAGGCCTATTTGCTACCAGACAAAGGCA AAATGGGCAAGAAGAAAACACTCGTAGTGAAGAAAACCTTGAATCCTGTGTATAACGAAATACTGCGGTATAAAA TTGAAAAACAAATCTTAAAGACACAGAAATTGAACCTGTCCATTTGGCATCGGGATACATTTAAGCGCAATAGTT CTCTGAAGCGGAAGACAGCACCAGTTGCCCTTGAAGCAGAAAACAGAGGTGAAATGAAACTAGCTCTCCAGTATG TCCCAGAGCCAGTCCCTGGTAAAAAGCTTCCTACAACTGGAGAAGTGCACATCTGGGTGAAGGAATGCCTTGATC TACCACTGCTAAGGGGAAGTCATCTAAATTCTTTTGTTAAATGTACCATCCTTCCAGATACAAGTAGGAAAAGTC GCCAGAAGACAAGAGCTGTAGGGAAAACCACCAACCCTATCTTCAACCACACTATGGTGTATGATGGGTTCAGGC TTGCTCTCTGGGAGAAGATGGTAAACTCCCCCAATACTTGGATTGAAGCAACACTGCCTCTCAGAATGCTTTTGA TTGCCAAGATTTCCAAA<u>TGA</u>GCCCAAATTCCACTGGCTCCTCCACTGAAAACTACTAAACCGGTGGAATCTGATC AAGTCAATCTGCATGTGCTTCTTTGATTACAAGGCCCAAGGGATTTAAATATAACAAAATGTGTAATTTGTGACT CTAATATTAAATAAGATATTTGAACAAGCTAGGAAAATTGAATTTCTGCTGCTGCTTCAAAGAAAAAGCTGCCCC AGAGCATTAAACATGGGGTATTGTTAAGAAGCAAAATGTTCTTGTTTGCCATCATGTGTTTCACACCACAATTCT GTGCCACAGTTAAGAGGGTCTGGTACCCTTGCAGGACCTTTGTAGGTTGTGGGAAAAAGTCGCAGAAAGATACTC GTAATCTCTAATAAAATATGGAATTCCATATTAGGGCAATGAGACTGAAACTACTGGTGTTTTTCTGCCTTGAGA TTGTTTTGACTTAATTCTAAAATAGGTCTCAAGCCTGTATTTTTTATGAGTTTATTTTTTTAAAACCCTGCATATA TATGATTGTTTTTCTTATAACTTTACTATATGAAAGCAGCATAAGAGTAGTCACAAACATGTTTTGCAACAAAGT TTTAATTAGAATGTAAGTTGCTCAGTTATACTGTTCTTCTTATGTATAAAATTTTCGTATTTTGTAAAAACCC TTAGAATAAATTATCATTTGATTTAAATTGT

MSKSVPAFLQDESDDRETDTASESSYQLSRHKKSPSSLTNLSSSSGMTSLSSVSGSVMSVYSGDFGNLEVKGNIQ FAIEYVESLKELHVFVAQCKDLAAADVKKQRSDPYVKAYLLPDKGKMGKKKTLVVKKTLNPVYNEILRYKIEKQI LKTQKLNLSIWHRDTFKRNSFLGEVELDLETWDWDNKQNKQLRWYPLKRKTAPVALEAENRGEMKLALQYVPEPV PGKKLPTTGEVHIWVKECLDLPLLRGSHLNSFVKCTILPDTSRKSRQKTRAVGKTTNPIFNHTMVYDGFRPEDLM EACVELTVWDHYKLTNQFLGGLRIGFGTGKSYGTEVDWMDSTSEEVALWEKMVNSPNTWIEATLPLRMLLIAKIS K

GGCAGGCATGGGAGCCGCGCGCTCTCTCCCGGCGCCCCACACCTGTCTGAGCGGCGCAGCGAGCCGCGGCCCGGGC GTGCTGTTGGGCAAGTGAGCCCTTACAGTGCCCCCTGGAAACCCACTTGGCCTGCATACCGCCTCCCTGTCGTCT TGCCCCAGTCTACCCTCAATTTAGCCAAGCCAGACTTTGGAGCCGAAGCCAAATTAGAAGTATCTTCTTCATGTG GACCCCAGTGTCATAAGGGAACTCCACTGCCCACTTACGAAGAGGCCAAGCAATATCTGTCTTATGAAACGCTCT ATGCCAATGGCAGCCGCACAGAGACGCAGGTGGGCATCTACATCCTCAGCAGTAGTGGAGATGGGGCCCCAACACC GAGACTCAGGGTCTTCAGGAAAGTCTCGAAGGAAGCGGCAGATTTATGGCTATGACAGCAGGTTCAGCATTTTTG GGAAGGACTTCCTGCTCAACTACCCTTTCTCAACATCAGTGAAGTTATCCACGGGCTGCACCGGCACCCTGGTGG CAGAGAAGCATGTCCTCACAGCTGCCCACTGCATACACGATGGAAAAACCTATGTGAAAGGAACCCAGAAGCTTC GAGTGGGCTTCCTAAAGCCCAAGTTTAAAGATGGTGGTCGAGGGGCCAACGACTCCACTTCAGCCATGCCCGAGC AGATGAAATTTCAGTGGATCCGGGTGAAACGCACCCATGTGCCCAAGGGTTGGATCAAGGGCAATGCCAATGACA TCGGCATGGATTATGATTATGCCCTCCTGGAACTCAAAAAGCCCCCACAAGAGAAAATTTATGAAGATTGGGGTGA GCGGGTCTGGGGTCTATGTGAGGATGTGGAAGAGACAGCAGCAGAAGTGGGAGCGAAAAATTATTGGCATTTTTT CAGGGCACCAGTGGGTGGACATGAATGGTTCCCCACAGGATTTCAACGTGGCTGTCAGAATCACTCCTCTAAAT AGCAATTAAGGGTCTTCATGTTCTTATTTTAGGAGAGGCCAAATTGTTTTTTGTCATTGGCGTGCACACGTGTGT GTGTGTGTGTGTGTGTAAGGTGTCTTATAATCTTTTACCTATTTCTTACAATTGCAAGATGACTGGCTTTA CTATTTGAAAACTGGTTTGTGTATCATATCATATATCATTTAAGCAGTTTGAAGGCATACTTTTGCATAGAAATA AAAAAAATACTGATTTGGGGCAATGAGGAATATTTGACAATTAAGTTAATCTTCACGTTTTTTGCAAACTTTGATT TTTATTTCATCTGAACTTGTTTCAAAGATTTATATTAAATATTTGGCATACAAGAGATATGA

TGCTGGCCGGGCGAGAGGCTGGCGGCTGGGCTCTCGCGCCCCTCCTGCAGGGCTCAGGCTCTCCCCCTCCTGTC TTCTCCGCGCTGTTCCTCGTCATGGCGGCCCTCAGCAAGTCCATCCCTCATAACTGCTATGAGATCGGCCACACT TGGCACCCTTCCTGCCGGGTCTCCTTCCTGCAGATCACCGGGGGCGCCCTGGAGGAGTCCCTGAAGATCTATGĆT CCTCTGTACTTGATTGCAGCAATTCTCCGGAAACGGAAATTAGACTATTATTTACACAAACTACTCCCTGAGATC GGAAAATTCTACTCATGGACTCCTGGCTTTGGTGCCGCTCTGCCAGCATCTTATGTGGCCATTCTCATTGAAAGA AGAGGAACCATCACAACATTAAGAAATGGAGAAGTCCTTTTGTTTTGCATCACAGCTGCCATGTACATGTTCTTT AAACATTATGAAGATAATTGCATCTCTTATTGCATTAAAGGTTTCATCAGAATGTTTAGCGTGGGGTACTTGATC CAGTGCTGCCTCCGAATCCCTTCTGCATTTAGGCATCTGTTTACACAGCCATCTCGGCTACTTTCTCTCTTCTAC AATAAAGAAAACTTCCAGCTTGGAGCTTTTCTTGGCTCTTTTGTTAGTATATACAAGGGTACTAGTTGCTTCCTG CGCTGGATCAGAĀACTTAGATGATGAACTACATGCTATTATAGCTGGATTTTTGGCAGGTATATCAATGATGTTT TATAAAAGCACAACAATTTCCATGTATTTAGCGTCCAAATTGGTAGAGACAATGTATTTCAAAAGGCATTGAAGCA GGGAAGGTTCCCTATTTTCCTCATGCAGATACTATCATCTATTCCATCTCTACAGCAATTTGCTTCCAGGCAGCT GTCATGGAAGTTCAGACTTTGAGACCATCTTACTGGAAGTTCCTTTTAAGACTCACCAAGGGCAAATTTGCTGTC ATGAACCGAAAAGTCCTTGATGTTTTTGGTACTGGTGCATCTAAACACTTTCAGGATTTCATCCCCAGGTTGGAT CCAAGATACACAACTGTAACACCAGAGTTGCCCACAGAGTTTTCCTGAAGATGACTGTAACTTATTAATGTGACT ${\tt AAATGTTTCATCTTGAAGAGTTAATTATGTTGAACACAAAGGAGGGGGCCCAAGCTCGAACTTCAGTGTTATTTC}$ AGTTAGAGATACTCTTTTCATTTGTTTTTGTTTTTCTTATGAATCAGAAATTCAGAAGCTTTTTAGGAAGATGTTG CTTTAAAAGATGTCTTTAGTTCATTCCAATATAATTCTTGATTAAAATTAGGATTATTTCTACATTTTAGGATTT ACAAAGGATCACGGGTACATGGATTTGGTCTATATATTTTTTTAAAGTTTTGAATTGGTATCTGTAGTAGTGGAA TGTTATAGATTTGAAGTAACTCTCCACGGACAGTGCTGCTTTCGTGTAGAGCAATTTAATTGGAGAAGTGGCCAT TCTTACTTCAGGGATGCAAAGATGGGTCTCATACCATTTGGATAAATGTCGTGGTATCCATGCTTTTTTTCAACT AATAACATCATCTCTCTCATGACCAGTTAATTGGGCTATTTGGCAGCCCAGTGAACCTATGTACTAATGGCAAG TGAATATTTAAAAACAAAACTTTTAAACTTCCTATAGGTTTATGATGTTTTCATTTATATGGACATAATCC TTCATAGCTCAGTTTATATGCCATTGTTGTATTAGAAGGGATCAAAATCCTATGGAACAAAGTAGTCTTGGCAAG TTGGCAGTTTGTGTCCTCTCAGCTGTTTAACTTATGTAATGGATGTTTTGCACCTGAAAACACTATAAAAATCCA GTGGTTGTTTAAAAAGTCCATTTGTCACTAATTCCATTCAGGTTCTCCAACCTTCTTCTTGAATATCATTGTCAC CATTTTTACTGTTAGAATAAAGAGGTGACACCATAAAGTCCTGCTGATAATGAGAGTAGTTCAGGACAGCTGTGA TTGAAATATGGTCGCTATTTACAGTTTTTCAGGGAAAAGTTATACTTTTCTATGTTAATAAAGAGCTGAAGTGGT CTACAGTTAATGTGACATGTAGGGATGATGATATTTTTAAAATACATTTTGTTGCTAAAAAGTTTTTAGGCCAGT GCAAATTATGCAGTAGAACTTGTGTTGCAAAAGGAATTATAACCCATACTTTAAAAATGCTTAATCCCTCATATT CAATTTCATCAAGCCTTGTATACTTCTGCTTAAATGTAATTCAATCCTTGGTTGTTATGGCAAACAGAAACCCAA CAAAAAGACAGACTCTGGTACTATGGTAACAGAGCCACTTTATCATTTGGTCAAAATTTGGCATTATGATTAGCT TTGTAGAACTGACCTGTTTATTTGGCAATGCTGTTAAAGGATCATTTCGGTTTCAGACTTCAAAGTTGATTAATA TAAAGCCCTGAGAACTGCACCTCATTTTCTTTATCCAGAAATTGTGCTTATATATTTTCCTGTCAGGTTTAAAAA GATGTTTTAATTCATAAATTATTGTTTTCATTGACATTAAAAGACTGTGATATTG

PCT/US2003/028547

3636/6881 FIGURE 3350

MRECVSIHVGQAGVQIGNVCWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFSETGAGKHVPRAVFVDLEPMVID EVCTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIRKLANQCTGFQGFLVFHSFGGGTGSGFTS LLIERLLVDYGKKSKLEFSNYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAICDICCRNLNIERPTYTN LNHLISQIVSSITASLRFDGALNVDLTEFQTNLVPYSHIHFPLATYAPVISAEKAYHEQLSVAEITNASFEPANQ MVKCDPRHGKYMACCLLCHGDVVPKDANAAIATIKTKRSIQFVDWCPTGFKVGINYQSPTVVPGGDLAMVQSAC

GGGACGGTAACCGGGACCCAGTGTCTGCTCCTGTCACCTTCGCCTCCTAATCCCTAGCCACTATGCGTGAATGCG ATGGTCATTGATGAAGTTTGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAA GATGCTGCCAATAACTATGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATT ${\tt CGCAAGCTGGCTAACCAGTGCACTGGTTTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGGAACTGGTTCT}$ GGGTTCACCTCCCTGCTCATAGAACGTCTCTTAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCAATTAC CCAGCGCCCCAGGTTTCCACAGCTGTAGTTGAGCCCTACAACTCCATCCTCACCACCCCACACCACCCCTGGAGCAC TCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTGTGACATCTGTTGTAGAAACCTCAATATCGAGCGCCCA ACCTACACTAACCTTAACCACCTTATTAGCCAGATTGTGTCCTCTATCACTGCTTCCCTGTCATTTCTGCTGAGA GTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTATTGTGCCATGGTGATGTGGTTCCCAAAGATGCCAATG $\tt CTGCCATTGCCACCATCAAGACCAAGCGTAGCATCCAGTTTGTAGATTGGTGCCCCACTGGCTTCAAGGTTGGCA$ TCAACTACCAGTCTCCCACTGTGGTGCCTGGTGGAGACCTGGCCAAGGCGAGTTTTCAGAGGCCCGTGAAGACAT TAAAGCTTTCTGGTTAGATTTTCATTTGGTGATCATGTCTTTTCCATGTGTACCTGTAATGTTTTTCCATCATGT CTCAAAGTACAGT

 ${\tt MIYITLYISECLKKLQKCNSPGKPGFLLNAIYAKPANKQEDEVMRAYLQQLRQETGLRLCEKVFDPQNDKPSKWW\ TCFVKRQFMNKSLSGPGQ}$

3641/6881 FIGURE 3355A

TTGGCAGACCTGTTGGCACTGAGTGATACACTGGCAGTGATGTCTGTGGACCTGGGCAGTGAGTCCATGAAGGTG GCCATTGTCAAACCTGGAGTGCCCATGGAAATTGTCTTGAATAAGGAATCTCGGAGGAAAACACCGGTGATCGTG CGTTACTTCCAGCACCTCCTGGGGAAGCAGGCAGATAACCCCCATGTAGCTCTTTACCAGGCCCGCTTCCCGGAG CACGAGCTGACTTTTGACCCACAGAGGCAGACTGTGCACTTTCAGATCAGCTCGCAGCTGCAGTTCTCACCTGAG GAAGTGTTGGGCATGGTTCTCAATTATTCTCGTTCTCTAGCTGAAGATTTTGCAGAGCAGCCCATCAAGGATGCA AAAGTGCTGCAGCTCATCAATGACAACACCGCCACTGCCCTCAGCTATGGTGTCTTCCGCCGGAAAGATATTAAC ACCACTGCCCAGAATATCATGTTCTATGACATGGGCTCAGGCAGCACCGTATGCACCATTGTGACCTACCAGATG GTGAAGACTAAGGAAGCTGGGATGCAGCCACAGCTGCAGATCCGGGGAGTAGGATTTGACCGTACCCTGGGGGGC CTGGAGATGGAGCTCCGGCTTCGAGAACGCCTGGCTGGGCTTTTCAATGAGCAGCGCAAGGGTCAGAGAGCAAAG GATGTGCGGGAGAACCCGCGTGCCATGGCCAAGCTGCTGCGTGAGGCTAATCGGCTCAAAACCGTCCTCAGTGCC TTTGAGGAGTTGTGCAGACTTGTTTGAGCGGGTGCCTGGGCCTGTACAGCAGGCCCTCCAGAGTGCCGAAATG AGTCTGXXXXXXXXXXXXXXXGTGATCCTGGTGGGTTGGGCCCACTCCGGGTCCCCAGAATTCAAGAAGGTGCTG CAGGCAGCTGCGCTCAGCAAAGCCTTTAAAGTGAAGCCATTTGTCGTCCGAGATGCAGTGGTCTACCCCATCCTG GTGGAGTTCACGAGGGAGGTGGAGGAGGAGCCTGGGATTCACAGCCTGAAGCACAATAAACGGGTACTCTTCTCT CGGATGGGGCCCTACCCTCAACGCAAAGTCATCACCTTTAACCGCTACAGCCATGATTTCAACTTCCACATCAAC TACGGCGACCTGGGGCTTCCTGGGGCCTGAAGATCTTCGGGTATTTGGCTCCCAGAATCTGACCACAGTGAAGCTA AAAGGGGTGGGTGACAGCTTCAAGAAGTATCCTGACTACGAGTCCAAGGGCATCAAGGCTCACTTCAACCTGGAT GAGAGTGGCGTGCTCAGTCTAGACAGGGTGGAGTCTGTATTTGAGACACTGGTAGAGGACAGCGCAGAAGAGGAA TCTACTCTCACCAAACTTGGCAACACCATTTCCAGCGTGTTTGGAGGCGGTACCACCAGATGCCAAGGAGAAT CTCAAGGAGGAAGCTGAGGCCCCAGTGGAGGATGGCTCTCAGCCCCCACCCCTGAACCTAAGGGAGATGCAACC CCTGAGGGAGAAAAGGCCACAGAAAAAGAAAATGGGGACAAGTCTGAGGCCCAGAAACCAAGTGAGAAAGGCAGAG GAAACTTCAGGACTTGACACTCCGAGACCTGGAGAAGCAGGAACGGGAAAAAGCTGCCAACAGCTTGGAAGCGTT CATATTTGAGACCCAGGACAAGCTGTACCAGCCCGAGTACCAGGAAGTGTCCACAGAGGAGCAGCGTGAGGAGAT CTCTGGGAAGCTCAGCGCCGCATCCACCTGGCTGGAGGATGAGGGTGTTGGAGCCACCACAGTGATGTTGAAGGA GAAGCTGGCTGAGCTGAGGAAGCTGTGCCAAGGGCTGTTTTTTCGGGTAGAGGAGCGCAAGAAGTGGCCCGAACG GCTGTCTGCCCTCGATAATCTCCTCAACCATTCCAGCATGTTCCTCAAGGGGGCCCGGCTCATCCCAGAGATGGA CCAGATCTTCACTGAGGTGGAGATGACAACGTTAGAGAAAGTCATCAATGAGACCTGGGCCTGGAAGAATGCAAC TCTGGCCGAGCAGGCTAAGCTGCCCGCCACAGAGAAGCCTGTGTTGCTCTCAAAAGACATTGAAGCTAAGATGAT GGCCCTGGACCGAGAGGTGCAGTATCTGCTCAATAAGGCCAAGTTTACCAAGCCCCGGCCCCGGCCTAAGGACAA GAATGGGACCCGGGCAGAGCCACCCCTCAATGCCAGTGCCAGTGACCAGGGGGAGAAGGTCATCCCTCCAGCAGG CCAGACTGAAGATGCAGAGCCCATTTCAGAACCTGAGAAAGTAGAGACTGGATCCGAGCCAGGAGACACTGAGCC CGACGAACTATTACCCCCACCTCTGTTTTCCCCATTCATCTCCACCCCCTTCCCCCACCACTTCTATTTAAA CATCGAGGGTTGGGGGGGGGTTGGTCCTGCCCTCGGCTGGAGTTCCTTTCTCACCCCTGTGATTTGGAGGTGTG GAGAAGGGGAAGGGACAGCTCACTGGTTCCTTCTGCAGTACCTCTGTGGTTAAAAATGGAACTGTTCTCCT CCCCAGCCCCACTCCTGTTCCCTACCCATATAGGCCCAAATTTGGGAAAATCACTATTAATTTCTGAATCCTTTG CCTGTGCGGTAGGAAGAGAATGGCTGCCAGTGGCTGATGGGTCCCGGTGATGGGAAGGGTATCAGGTTGCTGGGG AGTTTCCACTCTTCTCTGGTGATTGTTCCTTCCCTCCCTTCCTCTCCCACCATGCGATGAGCATCCTTTCAGGCC · CTCTTGCTCTGAGCCTCCCTTCCCCATTCCCATGCAGCTCCTTTCCCCCTGGGTTTCCTTGGCTTCCTGCAGCAA

3642/6881 FIGURE 3355B

GGAGGGCTCAAGGGGCTCTAAGAGGGAAAAGCTCCCCACACCCCCAGATGCTGCTCCTCCCCGGCTAGAGGGA ACCCAACACCCACCAGTGAAATCTGATGCAGCTGGGAGTTTGGACCTTGGGTCTAGACAGCTGGTGCGCCCAAGA GGTAGGGGGAGGGGTGCGGCTTCTCCCCAGTTCCCAGGGAGTCTTGTTTAAGCGGGGGCCTTGGGCAGTGTTT ${\tt TCCTGCTGAGGGTGGTTTTACATTTTTTTTCCTCATTGGCCCACAGAGAGTGGAGTTGGCCTAGCTCTGACGCGT}$ CCCCTCTTTATCCCCAATGTGCCCCCTCCATTAGGGGCTCCAGGTGGGCTCCAGCCCACACTTGCTCTCTGCCTC TGCTGACACGTGCACACACACACACACACACACTGCTCCTCTCTGCCTGTTTCCCCTGGAGTCCCATGCCCT GCCCCATCCAGACACTGCCCAAGGCCCACCCGTCTATTTCCACCTCATTCCCCCTTTAAGCTGAGAATGGGGTCT GCCTATAGAAGCTTCCAGAGACAGCTGAGACTGGGTCCCCGGTGCCTCCACCCTAGGATCTCAGGCCTGCCCCAA ACTGCTTCTTACAGCGTGGAGGTTTCTCTGATTTCTCCCTTATCTAGCAACACTTGGTTCTTTTGGCTAGTCAGG GCTGGGATCCCAGGGGGATCCACCTGCAGGAGTCAGAGGTAAAGAAGCATCCACACGGAGGGTAGTGGGGAAGGA CATTGTCAAAGCCTCGGGCCTGGCAGAAAGTGAGGGGGGGTGGGGCCGCTAGGCCACCTCCTGCTCAGCCACCCCT ACATTGAGTTCCTATCAGCCACCCCAGACTGGGTCTTCCCATGTATATAATGGAGGAAGACCCCTCCCAGCCCTC TCAGTCCCCCAACTCAAAGTGCCTCAGTTCCTCCATCTGCTCCCAGATCCCCTGGCACTCTAGACAGGCATGCCC TGCTATTGAACCCCTGCCAGCTCCATTTCTGCCCTGGCAACCCTGGGCCCAGCAGGTGGGTCGTCGTTGTCTGG CCCTCACTGCCCTGGCCCCAGCCCAGGCTGCCCAGTAGCCACGTAGCAGAAGTCTGAAGCCATGCCAGCCCTGGT GCGGCTCTCCCCTCTACACATTTGGGGTACTGGATAGGGTGAAGTTAGGGGAGAAAATTGTGGAGTCTTTCCAGC CACAGGGCAGAGGGGGGGGGGCTGCTTTTCCCAGCAGTATTAGTGTCCCCCAGGACAGGGGACCTT AGGAGGCAATCCCAGGGGCCTGCCTGATAGAGGCATTTCCTGTCCCTGTCTCCTCCTGCATCTCCTTTATCCTGC ACTGCCACCCTCTATTCCCCATTCTGTGTTGGACTTTGAAGGCCCCAAGCCCAAAGCACTGAGTTCCCCCT TAAGACACCTCCACACCCCCACAAGCAAAGCACAATTTTGGGGTCCATGTAGCATGGGCCACGTAGGAGGC TCCTGACTTGCCAGGGGCCCAGCCTCAGCATACCCACCGAGCAGCTGCCAGCCTGGGCTGAGGGTGGGCATGAGG CAGGAGTCAGCACTTGGACCTAGGGATGTGAGGTTTTCTGTGCCCCAAGTTTGTGGGAAGGTGGGCACTACTGCT GGGCCCACAGACACAGCCAGCTGGCAAAAGGGAGGTCTAGCCCAGCAGAGAGATGAGGACATTTTGCTTCTCTT CATGCCCACAGCATGAGCTGAGCTTCTGCTTTGCTGGAAATGAAATAAACTTGGTATGAATTGTGCCAAGGCCTC $\tt CCCAGTTGTCATCCTGCCTCTTGTTGCCCTCCTGTCCTTGCCCCCACCCCACACCCATGCCCCTGTTTCCTTA$ CAGATTTTGATATTGTTCTAATGTGTAATAGAACCAGCCGAGTCCCCTTTTATCAGAAGGGTCTGAAAAGCAGCA GCACAGAGTAGGTGAACACAGGCCTGCAAGTGCGACCACCTCAGACCCAGTACGTGTGCCCACAGTGGACACACT CACACCTCCAACACCCCACGCGCAGGCATGTTACACGCATGTACACACGCATGCACACCCAGATGGCCA CTCAGCACAGATGTGGCAGAGGGAATGGTCTGATCCTGCTGAAAGCCATTAAGGAGAAACGAATTTCCCAGTGCC AGCTCTGCTGAGCCAAGCAGACACGGATGTCCCCTCTTCTGGGAGGAGGGTAGTGCTCCCAGGCCTCAGGAGTCC CTGCTGCCAACACTGCCCAGCTTGTGAGGCCAGGAGGAGCCCCTGTCCCACTCGGTGCTGCTGCTCTTCTGACCC CTGCTGTGAGGAATGGGATTCTTGGTCGAAAAAATTGGTTTTCCTTTTTTGTATAAATGAAAAGAATCCAGGAGA AGCTGCCACCCTCCCAGCGTGATGCGCTACCTTGCTTCGGCGTCTTGTCGCCCTTTCCGCCTTTGGTCCA GGGACAGCCCAGCAGATCCTCCTGGTTCTGACCTGGGGGGTGTTTGCATCACCCCCTTTTACTTGTATTAAAAAA

CAGGCATCCAAAGCTGAGGTCGCTCCTACGGCCTGGGCTCGCCTTCGCTTTAGAGATGTTTGGCCTCTTCCCTCC CAAACAGCCCATCTTCAAAACCTGGACTCTTGGACTGGCCACCTGGCCACCTTTCCCTCTACCAAGACTCCACTTC CCAGACCCCTAAAATATTGACAACCTTGACAACCCCCAACCGAGGAGCCAGACTTTGTTTTGGACTAACTTCC ATAGCCCTATCATGGAGGCAGTGTACCTGGTAGTGAATGGGTTGGGCCTGGTGCTGGACGTGCTGACCTTGGTGT TGGTCCGGTTCACATGTGGGGGCTTGCAGGCCTTGTGTACTCTGCTGTATAGCTGCTGCTCTGGCCTAGAGAGCC TAAAGCTCCTGGGGCACCTGGCCTCTCATGGGGCACTGCGGAGCAGGGAGATACTGCACCGGGGCGTCCTCAATG TGGTCTCCAGTGGCCATGCTTTGCTGCGCCAGGCCTGTGACATCTGTGCCATTGCCATGAGCCTGGTGGCTTATG TGATCAACAGCCTGGTCAACATCTGCCTCATCGGCACTCAGAACCTCTTTTCCCTGGTGCTGGCCCTGTGGGATG CAGTGACCGGGCCTCTGTGGAGGATGACAGACGTAGTGGCTGCCTTCCTAGCCCACATTTCCAGCAGTGCTGTGG CCATGGCCATCCTCCTTTGGACACCCTGCCAACTAGCCCTGGAGCTGCTGGCCTCAGCTGCCCGCCTCCTGGCCA GCTTTGTGCTTGTCAATCTCACTGGCTTGGTGTTGCTAGCTTGTGTGCTGGCAGTGACGGTGACTGTTTGCATC AGGATGTCATGCGGCTCTCTCGCCTAGCACTGGGCTCAGAGGCCTGGCGCCGAGTCTGGAGCCGCAGTCTGCAGC TGGCGAGTTGGCCAAACCGGGGAGGGGCACCTGGAGCTCCCCAGGGTGACCCTATGAGGGTATTCTCAGTTAGGA CCCGGAGACAGGACACTCTTCCTGAAGCGGGGCGCAGATCAGAGGCAGAAGAGGAGGAGGACGACCATCAGAG TGACACCTGTCAGGGGCCGAGAGAGGCTCAATGAGGAGGCCTCCAGGTGGGCAAGACCCTTGGAAATTGCTGA AGGAGCAAGAGGAGCGGAAGAAGTGTGTCATCTGCCAGGACCAGAGCAAGACAGTGTTGCTCCTGCCCTGCCGGC ATCTGTGCCTGTGCCAGGCCTGCACTGAAATCCTGATGCGCCACCCCGTCTACCACCGCAATTGCCCGCTCTGCC CGCAGGCACTCACGCTAGGACAGCATTAACAC

GGCACGAGGGGCCACCGAGGCGCTGTCCCTGACCACCAGCACGAGACCCCTTTCTATCGCGCCAGTCCTGTGGTC TCCGCACCTCTCCAGCTCCTGCACCCCCGGCCCCCGTGGTTCCCAGCCGCACAGTAGCGTGTCCTGGGTAGCGTG CGCCGCCTGGCCCTACCAGGCTGAGCCTCTGGCTGCCAGAAGCGCGGGGCCTCCGGGAGAATACGTGCGG TCGCCCGCTCCGCGTGCGCCTACGCCTTCTGCTCCAGTTGCTTTCCCAATTGAGCGGAAAAGCCGGGGCATGTTG CCGGGGCCCTGGGCGGGACGGTTGTGCCCTGCAGCCCGAAGCCCGCCGGGGCACCTTCCCGCCCACGAGCTGCCC AGTCCCTCTGCTTGCGGCCCCTGCCAACGTCCCACAGGACACTGGGTCCCCTTGGAGCCTCCCCAGGCTTAATGA TTGTCCAGAAGGCGGCTATAAAGGGAGCCTGGGAGGCTGGGTGGAGGAGGAGCAGAAAAAACCCAACTCAGCAG ATCTGGGAACTGTGAGAGCGGCAAGCAGGAACTGTGGTCAGAGGCTGTGCGTCTTGGCTGGTAGGGCCTGCTCTT $\verb|TTCTACC| \underline{\textbf{ATG}} \\ \texttt{GCAGCCCAGGGCTATGGCTATTATCGCACTGTGATCTTCTCAGCCATGTTTGGGGGGCTACAGCCT} \\$ GTATTACTTCAATCGCAAGACCTTCTCCTTTGTCATGCCATCATTGGTGGAAGAGATCCCTTTGGACAAGGATGA TTTGGGGTTCATCACCAGCAGCCAGTCGGCAGCTTATGCTATCAGCAAGTTTGTCAGTGGGGTGCTGTCTGACCA GÁTGAGTGCTCGCTGGCTCTTCTTCTGGGCTGCTCCTGGTTGGCCTGGTCAACATATTCTTTGCCTGGAGCTC CACAGTACCTGTCTTTGCTGCCCTCTGGTTCCTTAATGGCCTGGCCCAGGGGCTGGGCCCCCCATGTGGGAA GGTCCTGCGGAAGTGGTTTGAGCCATCTCAGTTTGGCACTTGGTGGGCCATCCTGTCAACCAGCATGAACCTGGC TGGAGGGCTGGCCCTATCCTGGCAACCATCCTTGCCCAGAGCTACAGCTGGCGCAGCACGCTGGCCCTATCTGG GGCACTGTGTGTGTGTCTCCTCTGTCTCCTGCTCATCCACAATGAACCTGCTGATGTTGGACTCCGCAA CCTGGACCCCATGCCCTCTGAGGGCAAGAAGGGCTCCTTGAAGGAGGAGCACCCTGCAGGAGCTGCTGTC CCTTGTAGGCAGCATCGCAGCTGGCTACCTGTCAGACCGGGCCATGGCAAAGGCGGGACTGTCCAACTACGGGAA CCCTCGCCATGGCCTGTTGCTGTTCATGATGGCTGGCATGACAGTGTCCATGTACCTCTTCCGGGTAACAGTGAC CAGTGACTCCCCCAAGCTCTGGATCCTGGTATTGGGAGCTGTATTTGGTTTCTCCTCGTATGGCCCCATTGCCCT GTTTGGAGTCATAGCCAACGAGAGTGCCCCTCCCAACTTGTGGGCACCTCCCACGCCATTGTGGGACTCATGGC CAATGTGGGCGGCTTTCTGGCTGGGCTGCCCTTCAGCACCATTGCCAAGCACTACAGTTGGAGCACAGCCTTCTG GGTGGCTGAAGTGATTTGTGCGGCCAGCACGGCTGCCTTCTTCCTCCTACGAAACATCCGCACCAAGATGGGCCG $AGTGTCCAAGAAGGCTGAG\underline{TGA}AGAGAGTCCAGGTTCCGGAGCACCATCCCACGGTGGCCTTCCCCCTGCACGCT$ CTGCGGGGAGAAAAGGAGGGGCCTGCCTGGCTAGCCCTGAACCTTTCACTTTCCATTTCTGCGCCTTTTCTGTCA ${\tt CCCGGGTGGCGCTGGAAGTTATCAGTGGCTAGTGAGGTCCCAGCTCCCTGATCCTATGCTCTATTTAAAAGATAA}$ CCTTTGGCCTTAGACTCCGTTAGCTCCTATTTCCTGCCTTCAGACAAACAGGAAACTTCTGCAGTCAGGAAGGCT $\verb|CCTGTACCCTTCTTCTTTCCTAGGCCCTGTCCTGCCCGCATCCTACCCCATCCCCACCTGAAGTGAGGCTATCC| \\$ CTGCAGCTGCAGGGCACTAATGACCCTTGACTTCTGCTGGGTCCTAAGTCCTCTCAGCAGTGGGTGACTGCTGTT GCCAATACCTCAGACTCCAGGGAAAGAGAGGGGCCATCATTCTCACTGTACCACTAGGCGCAGTTGGATATAGG AAAAAAAAA

MAAQGYGYYRTVIFSAMFGGYSLYYFNRKTFSFVMPSLVEEIPLDKDDLGFITSSQSAAYAISKFVSGVLSDQMS
ARWLFSSGLLLVGLVNIFFAWSSTVPVFAALWFLNGLAQGLGWPPCGKVLRKWFEPSQFGTWWAILSTSMNLAGG
LGPILATILAQSYSWRSTLALSGALCVVVSFLCLLLIHNEPADVGLRNLDPMPSEGKKGSLKEESTLQELLLSPY
LWVLSTGYLVVFGVKTCCTDWGQFFLIQEKGQSALVGSSYMSALEVGGLVGSIAAGYLSDRAMAKAGLSNYGNPR
HGLLLFMMAGMTVSMYLFRVTVTSDSPKLWILVLGAVFGFSSYGPIALFGVIANESAPPNLCGTSHAIVGLMANV
GGFLAGLPFSTIAKHYSWSTAFWVAEVICAASTAAFFLLRNIRTKMGRVSKKAE

^{3649/6881} **FIGURE 3362**

 ${\tt MPPKDDKKKKDAGKSAKKDKDPVNKSGGKAKKKKWSKGKVRDKLNNLVLFDKATYDKLCKEVPNYKLITPAVVSE} \\ {\tt RLKIRGSLARAALQELLSKGLIKLVSKHRAQVIYTRNTKGGDAPAAGEDA} \\$

GAAGAAAACAGCCCAAAGATGAGAGTGATTCGCGTGGGTACCCGCAAGAGCCAGCTTGCTCGCATACAGACGGAC AGTGTGGTGGCAACATTGAAAGCCTCGTACCCTGGCCTGCAGTTTGAAATCATTGCTATGTCCACCACAGGGGAC AAGATTCTTGATACTGCACTCTCTAAGATTGGAGAGAAAAGCCTGTTTACCAAGGAGCTTGAACATGCCCTGGAG AAGANTGAAGTGGACCTGGTTGTTCACCCCTTGAAGGACCTGCCCACTGTGCTTCCTCCTGGCTTCACCATCGGA GCCATCTGCAAGCGGGAAAACCCTCATGATGCTGTTGTCTTTCACCCAAAATTTGTTGGGAAGACCCTAGAAACC CTGCCAGAGAGAGTGTGGTGGGAACCAGCTCCCTGCGAAGAGCAGCCCAGCTGCAGAGAAAGTTCCCGCATCTG GAGTTCAGGAGTATTCGGGGAAACCTCAACACCCGGCTTCGGAAGCTGGACGAGCAGCAGGAGTTCAGTGCCATC ATCCTGGCAACAGCTGGCCTGCAGCGCATGGGCTGGCACAACCGGGTGGGGCAGATCCTGCACCCTGAGGAATGC ATGTATGCTGTGGGCCAGGGGGCCTTGGGCGTGGAAGTGCGAGCCAAGGACCAGGACATCTTGGATCTGGTGGGT GTGCTGCACGATCCCGAGACTCTGCTTCGCTGCATCGCTGAAAGGGCCTTCCTGAGGCCACCTGGAAGGAGGCTGC AGTGTGCCAGTAGCCGTGCATACAGCTATGAAGGATGGGCAACTGTACCTGACTGGAGGAGTCTGGAGTCTAGAC GGCTCAGATAGCATACAAGAGACCATGCAGGCTACCATCCCTGCCCAGCATGAAGATGGCCCTGAGGAT GACCCACAGTTGGTAGGCATCACTGCTCGTAACATTCCACGAGGGCCCCAGTTGGCTGCCCAGAACTTGGGCATC AGCCTGGCCAACTTGTTGCTGAGCAAAGGAGCCAAAAACATCCTGGATGTTGCACGGCAGCTTAACGATGCCCAT ${\tt TAACTGGTTTGTGGGGCACAGATGCCTGGGTTGCTGCTGTCCAGTGCCTACATCCCGGGCCTCAGTGCCCCATTC}$ TCACTGCTATCTGGGGAGTGATTACCCCGGGAGACTGAACTGCAGGGTTCAAGCCTTCCAGGGATTTGCCTCACC TTTGAATGTAACCAATCCTACTAATAAACCAGTTCTGAAGGT

ATGTCGGGCCGCGCAAGACTGGCGGCAAGGCCCGCGCCCAAGGCCAAGTCGCGCTCGTCGCGCGCCGCCTCCAG
TTCCCAGTGGGCCGTGTACACCGGCTGCTGCGGAAGGGCCACTACGCCGAGCGCGTTGGCGCCGGCGCCAGTG
TACCTGGCGGCAGTGCTGGAGTACCTCACCGCTGAGATCCTGGAGCTGGCGGCCAATGCGGCCCGCACAACAAG
AAGACGCGAATCATCCCCCGCCACCTGCAGCTGGCCAACGACGAGGAGCTCAACAAGCTGCTGGGCGGC
GTGACGATCGCCCAGGGAGGCGTCCTGCCCAACATCCAGGCCGTGCTGCCCAAGAAGACCAGCGCCACCGTG
GGGCCGAAGGCGCCCTCGGGCGCAAGAAGGCCACCCAGGCCTCCCAGGAGTACTAA

CCCAGAATCCCAGGGAGTGATCAGCGGTGCTGTTTTCCTTATCATCCTCTTCTGCTTCATCCCTTTCCC GAACTGCTTTGTGAAGGAGCAGTGTAAGGCATTCCCCCACCATGAATTTGTGGCCCTGATAGGTGCCCTCCTTGC ${\tt CATCTGCTGCATGATCTTCCTGGGCTTTGCGGATGATGTACTGAATCTGCGCTGGCGCCATAAGCTGCTACC}$ TACAGCTGCCTCACTACCTCCTCATGGTCTATTTCACCAACTTTGGCAACACGACCATTGTGGTGCCCAAGCC $\verb|CTTCCGCCCGATACTTGGCCTGCATCTTGGGAATCCTGTACTATGTCTACATGGGGGCTGCTGGCAGTGTT|\\$ CTGTACCAATGCCATCAATATCCTAGCAGGAATTAACGGCCTAGAGGCTGGCCAGTCACTAGTCATTTCTGCTTC CATCATTGTCTTCAACCTGGTAGAGTTGGAAGGTGATTGTCGGGATGATCATGTCTTTTCCCTCTACTTCATGAT ACCCTTTTTTTTCACCACTTTGGGATTGCTCTACCACAACTGGTACCCATCACGGGTGTTTGTGGGAGATACCTT $\verb|CTGTTACTTTGCTGGCATGACCTTTGCCGTGGTGGGCATCTTGGGACACTTCAGCAAGACCATGCTACTATTCTT| \\$ CATGCCCCAGGTGTTCAACTTCCTCTACTCACTGCCTCAGCTCCTGCATATCATCCCCTGCCCTCGCCACCGCAT GGGCACCTTTATTTTAAAGGTGGCAGAGAGCCTCCAGCTGGTGACAGTACACCAGAGTGAGACTGAAGATGGTGA ATTCACTGAATGTAACAACATGACCCTCATCAACTTGCTACTTAAAGTCCTTGGGCCCATACATGAGAAAACCT CACATTGCTCCTGCTGCTGCAGATCCTGGGCAGTGCCATCACCTTCTCCATTCGATATCAGCTCGTTCGACT CTTCTATGATGTCTGAGTCCCTTGATCATTGTCCTTTACCTCACAGTCTCTAGGATTCCTGACTCAGGCTGACCT CTCTCTCTGGTCCCAGACTGCCTCTTGCCCAGGCCTCTCTCACTCTTCATACTCCTCCAGATTTTGTTCTCAGC ATTTTCCTTTCTCTGTGATCATTGGCATCCTGGGCGTTTCTTGCCCTCTGCTGACTACTGATTGGATTTTACCTA TGGCTTTCTGCAACTTGCTACTCTCTCCCTCTCCATCCCATCTTGCAGCCTCATAGGGTGGGATACAGCAGCTTT TTTGCAGTTATCCACACTCACATTTCAGAGTCCTGACTCTCAAGGAACCACTGGTTTTTGGGATAGAACTTGGGC CAGGGCTAGGAACACAGGCTCCACGGTGACATGTCATTTGATTGTAAATTAAGTGTTCTGATTAGTAAGAACTAA GCAGGGGCCACATGCTCTCAATGGAGACAATAAAGTGTTGTCTTTTTCTT

3654/6881 FIGURE 3367A

GCATGATTCCAGCAGGGGGCCCAGCCCCTGGGCCCCCTACAGCCCTGTTCCTGCAGAATCAGAAAGTCTGGTAA TTGAGAAGGACCTGCAAGAGATCATGGACTCACTGGTGCTAGAGGAGCCTGGAGCTGCTGGCAAGAAGCCTGCCG CAACCTCTCCACTGTCACCGATGGCTAATGGTGGGCCGCTACCTGCTGTCTCCCCCAACCAGCCCCGGCGCCATGT CTGTGGGCTCCAGCTATGAGAACACCTCTCCAGCCTTCTCCACTTCCTGCGGTTTGGGTTCATGGCCAAACTG TAAGTGATGAGAGACACTTGAGGAGGTCTAGGGACCCTAGAGAGCCATGGAAGCCTCACAAACCAGGCTTCAGGC $\verb|CTATAGGTAGGCCTGCGGGAAAAGGCAACAAAGACCAGGAATGTGATTGTGTCATCCTCTTTACCTCCTAGGC| \\$ CCCTGAGAGGTGACTGTATCTGGGTGGTGTTATGTGGAGAGGGGTGGATGAAGTGGTAGGGCCATGGGAGTAC TCACTCATGGGCCTGGGCATTCAAGGACTGGCAGCCCATCCTGCTGATAAACAGCCAAGGGCTGCCTGAGGG ${\tt CTAGACTGTGTTATCTGTGAGTGTGCATCAGTGTGCATTTGTGCATGTCAGGGCTGGTGTCTCTGTACTTGCCT}$ ATTAATGCAGGGCCAGGGCACATGTTGTATCCTTGTGTGCCTGTGCATCAGTGCTGGTGTGTCAGTATGTGTCCT TGTGTCTGTAGATCTGTGTGTACCTGCGTCAGGACGAGCAACTGAGTTTATCTGTGTCTCATTGTGGTCTGTAGT CTGCTTAACAGTGTGTTTCTGTATGTGTTTAGTGTGTTACTGTGGGTCCATTTGGTGTGTTCCTGTGTGTCCTGG GGTAGACTGAAAAAAGAAAGGAACAGGAAGATGGAAGGGGCTGTCCCAGAAGTGGGCAGGAAGAACCAGGCTGTT ATGCCATGTGGGCATGTGGCACAACAGCCTCGTTCTTCCTGCCCACTTCTGGGGCACCTTGTTTCCCTCTGCCTC GACAGGATACTGAACCTGGCTCTATCCCCACCAGGGCTCAGCTTCCTCCCCTTCATGTCCTGTCCATCCT CCCCAGGAACGCCAGCGCCTGGAGACCATCCTGAACCTGTGTGCCGAATACAGCCGGGCTGATGGGGGACCTGAG GCTGGGGAGCTTCCCAGCATTGGGGAGGCCACCGCAGCATTGGCACTGGCAGGCCGGAGGCCCTCACGAGGCCTT GCAGGGGCCTCTGGGCGGAGCAGCGAGGAGCCTGGCGTTGCCACCCAACGCCTATGGGAGAGTATGGAGCGCTCA GATGAGGAAAATCTCAAGGAGGAGTGCAGCAGCACCTGAGAGCACCCAGCAGGAGCACGAAGATGCACCTAGCACC AAGCTCCAGGGAGAGGTGCTAGCCCTGGAAGAAGAGCGGGCTCAGGTGCTGGGGCACGTGGAGCAGCTCAAGGTC CGTGTGAAGGAGCTAGAGCAGCTGCAGGAGTCAGCCCGAGAGGCCGGAAATGGAGCGGGCACTGCTGCAGGGA GAGAGGGAGGCAGGCGGCACTGCTGCAGAAGGAGCAGAAGGCAGTGGATCAGCTGCAGGAGAAGCTGGTGGCC TTGGAGACAGGCATCCAGAAGGAGAGGGACAAGGAGGCCAGAGGCCCTGGAGACTGAGACAAAGCTCTTTGAGGAC ATCCGGGCTCAGGCCGTGCAGGAATCAGAACGCCTGGCCCGGGACAAGAATGCCTCCTTACAGCTGCTGCAAAAG ${\tt TCGACCCTCAAAGAGATGGAGAAGCTGCTGCTCCTGCTGTAGACTTAGAGCAGTGGTACCAGGAGCTGATGGCC}$ TCCTCCTCTGGCTCTTCCTCCTCCTCCCAGCTCAGCGTGGCTACCCTGGGGCGTAGCCCCTCCCCAAAGAGC GCTCTACTCACCCAGAATGGCACGGGCAGCCTTCCTCGCAACCTGGCAGCCACACTGCAGGACATCGAGACCAAG CGCCAACTAGCTCTGCAGCAGAAGGGACAACAAGTGATTGAAGAGCAGCGGCGGCGACTGGCTGAGCTGAAGCAG AAAGCGGCAGCTGAGGCACAGTGCCAGTGGGATGCCCTTCACGGGGCAGCACCCTTCCCAGCGGGCCCCTCGGGC GCCTATGATACGCTGAGTCTGGAGAGCTCTGACAGCATGGAGACCAGCATCTCCACCGGGGGCAACTCGGCCTGC TCCCCTGACAACATGTCCAGCGCGAGTGGTCTGGACATGGGGAAGATCGAGAGATGGAGAAGATGCTGAAAGAG GCTCATGCAGAGAAGAACCGGCTCATGGAGTCGAGGGAGCCGGAGATGGAGCTGCGGCGGCAGGCCCTGGAGGAG GAGCGGCGGAGGCGTGAGCAGGTAGAACGGAGGCTGCAGAGTGAGAGTGCCCGGAGGCAGCAGCTGGTCGAGAAG GAGGTCAAGATGCGGGAGAAACAATTTTCCCAGGCACGACCCCTGACCCGCTACCTGCCAATCCGGAAGGAGGAC GTCTGCCGTGGCTACTTGGTCAAGATGGGCGGCAAGATTAAATCATGGAAGAAGCGCTGGTTTGTCTTCGACCGG CTCAAGCGCACCCTTTCCTATTATGTGGACAAGCATGAGACGAAGCTGAAGGGAGTCATCTATTTCCAGGCCATT GAGGAAGTGTACTACGACCACCTGCGCAGTGCAGCCAAGAAGAGGTTTTTCCGCTTCACTATGGTGACTGAGAGAC

PCT/US2003/028547

3655/6881 FIGURE 3367B

CCGAACCCAGCCTCACCTTCTGCGTAAAGACCCATGACCGGCTGTACTACATGGTGGCCCCATCTGCAGAGGCC ${\tt TCCTGGCAGAGCACAACTGGGGCTTTTGTATAAGAAGACTTTAATATTCTGTAAGGAGCTTGGTCCTGTGAGTTT}$ AACTTGCAGTAACCCTTTAGGGTCCTGCCCCAGGCCCAGGCTGAGGAGCTGTCACAGAGAGGGCCTCAGC TCTGACCTGACACCTGCTCTCCCCAGCCTGTTTTCTCTTTTCTAAAAGACAAATTATGGTACCATAAGCTGCCAA ${\tt AGATCCCTTCCTGCCTCAGACCCCTTTGCCAGGGGGCTTTGGGGGGCTGAGCAGAGCCACATCCAGAGTGGGGTAAT}$ AGCTCAGGCGGCCCGCTTCCCATTTCTCAAACCCCGCTCTGCCCCATTGTTCTCCTTATACTTTTATT ACCTTGCTCAAGGGCCAGAGATCTCAAGTGTCAACCTTGAGGTCCCAGCTCCATCCCCTAGTTGCAGACTCATCA ${\tt CCATGGTTACCATAGTGACTGCTTCATTGCCATGGTTACATACTAATTGCTGCAGCTCTGTGGCCCAGCCCACTG}$ CTTCAGCTGTGGGCCATCTGAGGGTACGTGCCATCATCTCTCCAGCCCAGGCCCCTGGGCATCTCATGCTGGGGG GAAGGGACTGAATACCTTTTTCCTTCCCCCTGCTGTGTCTTCAGCCCTGATGCACAGGCTGCCAGCCCCCCAGT $\verb|CCAGCCCTCCCCTTCCACTGGTGCCTTGCTTAGAGCCAGAAGGGATGAAGCCGGGGGATCTATGGAACAGAGGA|\\$ GGAGCGATGCAGTTGGGAGAGGAAGCTAGAAGGGTTATGGTTGGAGTTCTGTACAGTGTTGAGTTTCCGACAGGG AAAGAGGATTCCTCCAATGCTCCTAGAGAGAAAGCCTGAGCAGGAGATGATGCAGCAGAGGGGAAGGGCCCTGTG GTGCCGCCCCTTCCTTCAGCCTCCGAAGGGTGATGGAAATGGAGAGTGGAGGACCAGGCCTCCAGCTGTCTGG CCTCGCCCTTCACGCCTTAACACTAAGCCCACCTCCCCTGCTCTCCCTTCCCAGCATTGAGCCCTTGGTTGCCTGG GCCCAGGCTGGGGGTTTTCAGTATTTGTAAGCATTTCAGCAGAACAATAAAGCCTTTGGACTACGGAA

MDALNRNOIGPGCOTOTMVOKGPLDLIETGKGLKVQTDKPHLVSLGSGRLSTAITLLPLEEGRTVIGSAARDISL QGPGLAPEHCY1ENLRGTLTLYPCGNACT1DGLPVRQPTRLTQGCMLCLGQSTFLRFNHPAEAKWMKSM1PAGGR APGPPYSPVPAESESLVNGNHTPQTATRGPSACASHSSLVSSIEKDLQEIMDSLVLEEPGAAGKKPAATSPLSPM ANGGRYLLSPPTSPGAMSVGSSYENTSPAFSPLSSPASSGSCASHSPSGQEPGPSVPPLVPARSSSYHLALQPPQ SRPSGARSESPRLSRKGGHERPPSPGLRGLLTDSPAATVLAEARRATESPRLGGQLPVVAISLSEYPASGALSQP TSIPGSPKFQPPVPAPRNKIGTLQDRPPSPFREPPGSERVLTTSPSRQLVGRTFSDGLATRTLQPPESPRLGRRG LDSMRELPPLSPSLSRRALSPLPTRTTPDPKLNREVAESPRPRRWAAHGASPEDFSLTLGARGRRTRSPSPTLGE SLAPHKGSFSGRLSPAYSLGSLTGASPCQSPCVQRKLSSGDLRVPVTRERKNSITEISDNEDDLLEYHRRQRQER LREQEMERLERORLETILNLCAEYSRADGGPEAGELPSIGEATAALALAGRRPSRGLAGASGRSSEEPGVATQRL WESMERSDEENLKEECSSTESTQQEHEDAPSTKLQGEVLALEEERAQVLGHVEQLKVRVKELEQQLQESAREAEM ERALLQGEREAERALLQKEQKAVDQLQEKLVALETGIQKERDKEAEALETETKLFEDLEFQQLERESRVEEEREL AGQGLLRSKAELLRSIAKRKERLAILDSQAGQIRAQAVQESERLARDKNASLQLLQKEKEKLTVLERRYHSLTGG ${\tt RPFPKTTSTLKEMEKLLLPAVDLEQWYQELMAGLGTGPAAASPHSSPPPLPAKASRQLQVYRSKMDGEATSPLPR}$ TRSGPLPSSSGSSSSSQLSVATLGRSPSPKSALLTQNGTGSLPRNLAATLQDIETKRQLALQQKGQQVIEEQRR $\verb"RLAELKQKAAAEAQCQWDALHGAAPFPAGPSGFPPLMHHSILHHLPAGRERGEEGEHAYDTLSLESSDSMETSIS"$ TGGNSACSPDNMSSASGLDMGKIEEMEKMLKEAHAEKNRLMESREREMELRRQALEEERRRREQVERRLQSESAR ${\tt RQQLVEKEVKMREKQFSQARPLTRYLPIRKEDFDLKTHIESSGHGVDTCLHVVLSSKVCRGYLVKMGGKIKSWKK}$ RWFVFDRLKRTLSYYVDKHETKLKGVIYFQAIEEVYYDHLRSAAKKRFFRFTMVTESPNPALTFCVKTHDRLYYM VAPSAEAMRIWMDVIVTGAEGYTQFMN

GTGCTGGTCTTCCTCTGCAGCCTGCTGGCCCCCATGGTCCTGGCCAGTGCAGCTGAAAAGGAAAGGAAATGGAC CTCCTTATCCTAAGTCGCAGGTGCAAGTGCAGTTTCAATCAGAAGCCCCGGGCCCCAGGAGATGAGGAAGCCCAG GTGGAGAACCTCATCACCGCCAATGCAACAGAGCCCCAGAAAGCAGAGAAC<u>TGA</u>AGTGCAGCCATCAGGTGGAAG CCTCTGGAACCTGAGGCGGCTGCTTGAACCTTTGGATGCAAATGTCGATGCTTAAGAAAACCGGCCACTTCAGCA ACAGCCCTTTCCCCAGGAGAAGCCAAGAACTTGTGTGTCCCCCACCCTATCCCCTAACACCATTCCTCCACCT AGTGAACTGTGGACTCGCTTTCCCAGGCAGGGGCTGAGCCACATGGCCATCTGCTCCTCCCTGCCCCCGTGGCCC ${\tt TCCATCACCTTCTGCTCCTAGGAGGCTGCTTGTTGCCCGAGACCAGCCCCCTCCCCTGATTTAGGGATGCGTAGG}$ GTAAGAGCACGGCAGTGGTCTTCAGTCGTCTTGGGACCTGGGAAGGTTTGCAGCACTTTGTCATCATTCTTCAT GGACTCCTTTCACTCCTTTAACAAAAACCTTGCTTCCTTATCCCACCTGATCCCAGTCTGAAGGTCTCTTAGCAA GCTTCTACTCTGCCCCTGGGGAATGTGTCCCCTGCATATCTTCTCAGCAATAACTCCATGGGCTCTGGGACCCTA $\verb|CCCCTTCCAACCTTCCCTGCTTCTGAGACTTCAATCTACAGCCCAGCTCATCCAGATGCAGACTACAGTCCCTGC| \\$ GAGCAGAGGCCTTTGCTTCTCTGCCTACGTCCCCTTAGATGGGCAGCAGAGGCAACTCCCGCATCCTTTGCTCTG CCTGTCGGTGGTCAGAGCGGTGAGCGAGGTGGGTTGGAGACTCAGCAGGCTCCGTGCAGCCCTTGGGAACAGTGA GAGGTTGAAGGTCATAACGAGAGTGGGAACTCAACCCAGATCCCGCCCCTCCTGTCCTCTGTGTTCCCGCGGAAA AATAAAATATCCTTTGTTTCCTAGTGA

 ${\tt MELVLVFLCSLLAPMVLASAAEKEKEMDPFHYDYQTLRIGGLVFAVVLFSVGILLILSRRCKCSFNQKPRAPGDE} \\ {\tt EAQVENLITANATEPQKAEN}$

MANKGPSYGMSREVQSKIEKKYDEELEERLVEWIIVQCGPDVGRPDRGRLGFQVWLKNGVILSKLVNSLYPDGSK PVKVPENPPSMVFKQMEQVAQFLKAAEDYGVIKTDMFQTVDLFEGKDMAAVQRTLMALGSLAVTKNDGHYRGDPN WFMKKAQEHKREFTESQLQEGKHVIGLQMGSNRGASQAGMTGYGRPRQIIS

GACATGCTCAGCAACATGCCAGGCACAGCTGCAGGCTCCAGTGGGCGCGCATCTCCATCAGCCCCAGTGCTGGT CAGATGCAGATGCACCCTCAACCTGATGGCCACCCTCAGCTATGGGCACCGTCCCTTGTCCAAGCAGCTG AGTGCTGACAGTGCAGAGGCTCACAGCTTGAACGTGAATCGGTTCTCCCCTGCTAACTACGACCAGGCGCATTTA CACCCCATCTGTTTTCGGACCAGTCCCGGGGTTCCCCCAGCAGCTACAGCCCTTCAACAGGAGTGGGGTTCTCT CACTATACCACGTCGGCACTACAGCAGGCCCTGCTGTCTCCCACGCCGCCAGACTATACAAGACACCAGCAGGTA CCCCACATCCTTCAAGGACTGCTTTCTCCCCGGCATTCGCTCACCGGCCACTCGGACATCCGGCTGCCCCCAACA CAGGAACTGTTCAGGCACATGAACCAAGGGGATGCGGGGAGTCTGGCTCCCAGCCTTGGGGGACAGAGCATGACA GAGCGCCAGGCTTTATCTTATCAAAATGCTGACTCTTATCACCATCACACCAGCCCCCAGCATCTGCTACAAATC CATTCAGAGAGCATGGAGGACTGCTCGTGTGAGGGGGCCCAAGGATGGCTTCCAAGACAGTAAGAGTTCAAGT ACATTGACCAAAGGTTGCCATGACAGCCCTCTGCTCTTGAGTACCGGTGGACCTGGGGACCCTGAATCTTTGCTA GGAACTGTGAGTCATGCCCAAGAATTGGGGATACATCCCTATGGTCATCAGCCAACTGCTGCATTCAGTAAAAAT AAGGTGCCCAGCAGAGAGCCTGTCATAGGGAACTGCATGGATAGAAGTTCTCCAGGACAAGCAGTGGAGCTGCCG GATCACAATGGGCTCGGGTACCCAGCACGCCCCTCCGTCCATGAGCACCACAGGCCCCGGGCCCTCCAGAGACAC CACACGATCCAGAACAGCGACGATGCTTATGTACAGCTGGATAACTTGCCAGGAATGAGTCTCGTGGCTGGGAAA **AACTCCTCTTGCTATCCATCTACGTGTATTACAGACATTCTGCTCAGCTACAAGCACCCCGAAGTCTCCTTCAGC** ${\tt ATGGAGCAGGCGTG} \underline{{\tt TAA}} {\tt CAAGAAACAGAGAGTTTTGTGTACAGCTTGGGAATGAAAAGGTTGATTGTAAAC$ CCACAGTATCTAGCAGCGTTGTGCCAAATTGCCCTTGTGTTTCTCCACCCAAAATATCACAGCTGCTTTCCTC ACATTTGGTTCATCCGTGTGCTGTTCTTTTGGGTTCTGAGAGGGTTTTGCCATGTTTGCTTGTATGACCAAGTCA CCAAGGAAATAAACAGGAAGGAAATCC

 $\label{thm:matlsyghplskqlsadsaeahslnvnrfspanydqahlh} $$\operatorname{MLSNMPGTAAGSSGRGISISPSAGQMQMQHRTNLMATLSYGHRPLSKQLSADSAEAhSLNVNRFSPANYDQAHLH} $$\operatorname{MLSNMPGTAAGSSGRGISISPSAGQMQMQMQHRTNLMATLSYGHRPLSKQLSADSAEAhSLNVNRFSPANYDQAHLH} $$\operatorname{MLSPQSAGSPSYSPSTGVGFSPTQALKVPPLDQFPTFPPSAHQQPPHYTTSALQQALLSPTPPDYTRHQQVPHILQGELSPRHSLTGHSDIRLPPTEFAQLIKRQQQQRQQQQQQQQQQQEYQELFRHMNQGDAGSLAPSLGGQSMTERQALSYQNADSYHHHTSPQHLLQIRAQECVSQASSPTPPHGYAHQPALMHSESMEEDCSCEGAKDGFQDSKSSSTLTKGCHDSPLLLSTGGPGDPESLLGTVSHAQELGIHPYGHQPTAAFSKNKVPSREPVIGNCMDRSSPGQAVELPDHGLGYPARPSVHEHHRPRALQRHHTIQNSDDAYVQLDNLPGMSLVAGKALSSARMSDAVLSQSSLMGSQQFQDGENEECGASLGGHEHPDLSDGSQHLNSSCYPSTCITDILLSYKHPEVSFSMEQAGV$

MKAAVLTLAVLFLTGSQARHFWQQDEPPQSPWDRVKDLATVYVDVLKDSGRDYVSQFEGSALGKQLNLKLLDNWD SVTSTFSKLREQLGPVTQEFWDNLEKETEGLRQEMSKDLEEVKAKVQPYLDDFQKKWQEEMELYRQKVEPLRAEL QEGARQKLHELQEKLSPLGEEMRDRARAHVDALRTHLAPYSDELRQRLAARLEALKENGGARLAEYHAKATEHLS TLSEKAKPALEDLRQGLLPVLESFKVSFLSALEEYTKKLNTQ

CCACCGAGATCGAGTCGCTATGCATGAACTGTTACTGCAATGGCATGACGCGCCTCCTGCTCACCAAGATTCCCT TCTTCAGAGAAATAATAGTGAGCTCCTTTTCCTGCGAGCACTGTGGCTGGAACAACACGGAGATCCAGTCGGCAG AGACTGACTCTGCTGCCACAAGGATTCCTGAGCTAGATTTTGAAATTCCTGCCTTTAGCCAGAAAGGAGCTCTGA ATGCTACAGCTGAAAGAATTGATGAGTTCATTGTCAAACTGAAGGAGCTAAAGCAAGTAGCCTCCCCTTTCACTC TGATCATTGATGATCCCTCAGGGAACAGTTTTGTGGAAAACCCACATGCTCCTCAGAAAGATGATGCCCTGGTGA TCACACACTACAACCGGACCCGACAGCAGGAAGAGATGCTGGGGCTTCAAGAAGAAGCACCAGCAGAGAAGCCAG AAGAGGAAGATCTCAGAAATGAAGTGCTCCAGTTCAGCACAAACTGCCCAGAATGCCAAATGCCCCGGCTCAGACCA ACATGAAGCTAGTACAAATCCCTCACTTTAAGGAGGTTATCATCATGGCTACCAACTGCGAGAACTGTGGGCATC GGACCAATGAGGTGAAATCTGGAGGAGCAGTAGAACCCTTGGGCACCAGGATCACCCTCCACATCACAGATGCCT CAGATATGACCAGAGACCTCCTCAAGTCTGAGACTTGCAGTGTGGAAATCCCAGAGCTAGAATTTGAACTGGGAA TGGCAGTCCTCGGGGGCAAGTTCACCACACTGGAAGGGCTGCTGAAAGACATCCGGGAACTGGTGACCAAAAATC TCATCGAAGGTAACATGAAGGCCCACTTTATTATGGATGATCCAGCAGGAAACAGTTACTTGCAGAATGTGTATG CGCCTGAAGATGATCCTGAGATGAAGGTGGAGCGTTACAAGCGCACCTTTGACCAAAATGAGGAGCTAGGGCTCA $\tt ATGACATGAAGACAGAGGGCTATGAGGCAGGCCTGGCTCCGCAACGG\underline{TAG}{C} AGTGGGTGGCTCAAGGGCCAGCCT$ CCAGCGCTGCTCTTTCTGTAGGTTATTTATTAGTATTGGATGAAGGCGAAGGCTGGGAGTGTCTTTCCCACCAGC CCTTGCCCATGGTGGGGAGGACATCTGGTCTGAGTCAGAGATCTGTGCACACTTTCTAAACAGCTTGTGATGCAA GTGTGAGCCTATTGTGTTACTTGACCTTATTTTGGAAGTTTTGAATTGGCCTAGGAGGAAACCCAGAAATGAACC AGGGGTATGTCATCACTTTTTCATATCAAGTCCTCACCCTCCTTCCACATAATGCTCTATCCTCTAAGGTTGGA ACTCTGAAGTTGGAGAAGGTGGAATAAAGTTACACCTGG

MAASGAVEPGPPGAAVAPSPAPAPPPAPDHLFRPISAEDEEQQPTEIESLCMNCYCNGMTRLLLTKIPFFREIIV SSFSCEHCGWNNTEIQSAGRIQDQGVRYTLSVRALEDMNREVVKTDSAATRIPELDFEIPAFSQKGALTTVEGLI TRAISGLEQDQPARRANKDATAERIDEFIVKLKELKQVASPFTLIIDDPSGNSFVENPHAPQKDDALVITHYNRT RQQEEMLGLQEEAPAEKPEEEDLRNEVLQFSTNCPECNAPAQTNMKLVQIPHFKEVIIMATNCENCGHRTNEVKS GGAVEPLGTRITLHITDASDMTRDLLKSETCSVEIPELEFELGMAVLGGKFTTLEGLLKDIRELVTKNPFTLGDS SNPGQTERLQEFSQKMDQIIEGNMKAHFIMDDPAGNSYLQNVYAPEDDPEMKVERYKRTFDQNEELGLNDMKTEG YEAGLAPQR

MESGFTSKDTYLSHFNPRDYLEKYYKFGSRHSAESQILKHLLKNLFKIFCLDGVKGDLLIDIGSGPTIYQLLSAC ESFKEIVVTDYSDQNLQELEKWLKKEPEAFDWSPVVTYVCDLEGNRVKGPEKEEKLRQAVKQVLKCDVTQSQPLG AVPLPPADCVLSTLCLDAACPDLPTYCRALRNLGSLLKPGGFLVIMDALKSSYYMIGEQKFSSLPLGREAVEAAV KEAGYTIEWFEVISQSYSSTMANNEGLFSLVARKLSRPL

 ${\tt MTEMSFLSSEVLVGDLMSPFDQSGLGAEESLGLLDNYLEVAKHFKPHGFSRDKAKAGFSEWLAVDGLGSPSNNSKEDAFSGTDWMLEKMDLKEFVFDALLGIDNLETMPDELLTTLDDTCDLFAPLVQETNKETPRR}$

AGCTGGAAGCCTCAAGCAGCCGGCGCCGTCTCTGCCCCGGGGCGCCCTATGGCTTGAAGAGCCTGGCCACCCAGT ${\tt GGCTCCACCGCCCTG} \underline{\textbf{ATG}} \texttt{GATCCACTGAATCTGTCCTGGTATGATGATGTGTGGAGGGCAGAACTGGAGCCGG}$ CCCTTCAACGGGTCAGACGGGAAGGCGGACAGACCCCACTACAACTACTATGCCACACTGCTCACCCTGCTCATC GCTGTCATCGTCTTCGGCAACGTGCTGGTGTGCATGGCTGTGTCCCGCGAGAAGGCGCTGCAGACCACCAAC TACCTGATCGTCAGCCTCGCAGTGGCCGACCTCCTCGTCGCCACACTGGTCATGCCCTGGGTTGTCTACCTGGAG GTGGTAGGTGAGTGGAAATTCAGCAGGATTCACTGTGACATCTTCGTCACTCTGGACGTCATGATGTGCACGGCG AGCATCCTGAACTTGTGTGCCATCAGCATCGACAGGTACACAGCTGTGGCCATGCCCATGCTGTACAATACGCGC TACAGCTCCAAGCGCCGGGTCACCGTCATGATCTCCATCGTCTGGGTCCTGTCCTTCACCATCTCCTGCCCACTC CTCTTCGGACTCAATAACGCAGACCAGAACGAGTGCATCATTGCCAACCCGGCCTTCGTGGTCTACTCCTCCATC GTCTCCTTCTACGTGCCCTTCATTGTCACCCTGCTGGTCTACATCAAGATCTACATTGTCCTCCGCAGACGCCGC AAGCGAGTCAACACCAAACGCAGCCGAGCTTTCAGGGCCCACCTGAGGGCTCCACTAAAGGGCAACTGTACT CACCCGAGGACATGAAACTCTGCACCGTTATCATGAAGTCTAATGGGAGTTTCCCAGTGAACAGGCGGAGAGTG GAGGCTGCCCGGCGAGCCCAGGAGCTGGAGATGGAGATGCTCTCCAGCACCAGCCCACCCGAGAGGACCCGGTAC AGCCCCATCCCACCCAGCCACCACCAGCTGACTCTCCCCGACCCGTCCCACCATGGTCTCCACAGCACTCCCGAC AGCCCCGCCAAACCAGAGAAGAATGGGCATGCCAAAGACCACCCCAAGATTGCCAAGATCTTTGAGATCCAGACC AACATACACTGTGACTGCAACATCCCGCCTGTCCTGTACAGCGCCTTCACGTGGCTGGGCTATGTCAACAGCGCC ${ t GTGAACCCCATCATCTACACCACCTTCAACATTGAGTTCCGCAAGGCCTTCCTGAAGATCCTCCACTGC}{ t { t GCA}}{ t CTC}$ GCAGGAAGGCCTGGGTGGATCGGCCTCCTCTTCACCCCGGCAGGCCCTGCAGTGTTCGCTTGGCTCCATGCTCCT CACTGCCCGCACACCCTCACTCTGCCAGGGCAGTGCTAGTGAGCTGGGCATGGTACCAGCCCTGGGGCTGGGCCC CCCAGCTCAGGGGCAGCTCATAGAGTCCCCCCTCCCACCTCCAGTCCCCTATCCTTGGCACCAAAGATGCAGCC ${\tt GCCTTCCTTGACCTTCCTGGGGGCTCTAGGGTTGCTGGAGCCTGAGTCAGGGCCCAGAGGCTGAGTTTTCTCTT}$ TGTGGGGCTTGGCGTGGAGCAGGCGGTGGGGAGAGATGGACAGTTCACACCCTGCAAGGCCCACAGGAGGCAAGC AAGCTCTCTTGCCGAGGAGCCAGGCAACTTCAGTCCTGGGAGACCCATGTAAATACCAGACTGCAGGTTGGACCC CAGAGATTCCCAAGCCAAAAACCTTAGCTCCCTCCCGCACCCCGATGTGGACCTCTACTTTCCAGGCTAGTCCGG ACCCACCTCACCCCGTTACAGCTCCCCAAGTGGTTTCCACATGCTCTGAGAAGAGGAGCCCTCATCTTGAAGGGC CCTTCTCACAGCACATGCTGGCCAGCCTGGGGCCTGGCAGGGTCAGGCCCTGGAACTCTATCTGGGCCTGGG CTAGGGGACATCAGAGGTTCTTTGAGGGACTGCCTCTGCCACACTCTGACGCAAAACCACTTTCCTTTTCTATTC CTTCTGGCCTTTCCTCTCTCTGTTTCCCTTCCCTTCCACTGCCTCTGCCTTAGAGGAGCCCACGGCTAAGAGGC GGCCTAGACTCTGTAACATCACTATCCATGCACCAAACTAATAAAACTTTGACGAGTCACCTTCCAGGACCCCTG **GGTAAAAAAAAAAAAAA**

MDPLNLSWYDDDLERQNWSRPFNGSDGKADRPHYNYYATLITLLIAVIVFGNVLVCMAVSREKALQTTTNYLIVS LAVADLLVATLVMPWVVYLEVVGEWKFSRIHCDIFVTLDVMMCTASILNLCAISIDRYTAVAMPMLYNTRYSSKR RVTVMISIVWVLSFTISCPLLFGLNNADQNECIIANPAFVVYSSIVSFYVPFIVTLLVYIKIYIVLRRRRKRVNT KRSSRAFRAHLRAPLKGNCTHPEDMKLCTVIMKSNGSFPVNRRRVEAARRAQELEMEMLSSTSPPERTRYSPIPP SHHQLTLPDPSHHGLHSTPDSPAKPEKNGHAKDHPKIAKIFEIQTMPNGKTRTSLKTMSRRKLSQQKEKKATQML AIVLGVFIICWLPFFITHILNIHCDCNIPPVLYSAFTWLGYVNSAVNPIIYTTFNIEFRKAFLKILHC

GATGCTGATAAAGAGAAAGATTTGCAGAAATTTCTTAAAAATGTGGATGAAATCTCCAATTTAATTCAGGAGATGA

AATTCTGATGACCCAGTTGTGCAACAGAAAGCTGTCCTGGAGACAGAAAAGAGACTACTGCTTATGGAGGAAGAC CAGGAGGAGGATGAATGCAGGACCACCTTGAACAAGACTATGATCAGTCCTCCACAAACTGCTATGAAGAGTGCA GAAGAAATAAACTCAGAGGCCTTCTTGGCATCTGTGGAGAAGGATGCAAAGGAACGAGCCAAGAGAAGAAGGAA AACAAAGTCTTGGCGGATGCCCTAAAAGAAAAAGGGAATGAAGCATTTGCTGAAGGCAATTATGAAACAGCTATC CTGCGCTACAGTGAGGGTTTGGAGAAGCTGAAGGACATGAAAGTGCTGTACACCAACCGAGCCCAGGCTTATATG AAACTTGAGGACTATGAGAAGGCACTGGTGGATTGTGAGTGGGCTCTCAAGTGTGATGAAAAATGCACAAAAGCA TATTTCACATGGGAAAAGCCAACCTGGCCCTGAAGAACTACAGTGTGTCTAGAGAGTGTTATAAGAAGATCTTA GAAATAAACCCCAAGCTGCAAACCCAGGTGAAAGGTTACCTGAATCAAGTAGATCTTCAGGAAAAAGCAGACCTT CAAGAAAAGGAAGCCCACGAACTGCTGGATTCAGGAAAGAACACAGCCGTGACCACCAAGAACCTCCTGGAGACC ACAGAACTTTATTCAGAATGCACAATGGATTTAGTATCATCAGTGACAACGAGGTCATAAGAAGGTGTTTT AGGAACGAGGAAAACCAGCGTGTGCTAGTGATACACCATGACAGGGCCAGGCTGTTGGCCGCCCTCTTGTCCTCC ${\tt ATCATCAACCACCTTGACCTGACCAGATTATTGGAAGCGCTGGTGTCATTTCTTGATTTCTCGGATAAGGAGGCC}$ GGTGTTCTCCCTGCACTCACAGGCGTTCTGAAGACAGATCCCAAGGTAAGCAGCTCCTCGGCTCTGTGCCAGTGC ATTGCCATCATGGGAAACCTCAGTGCTGAGCCCACTACCCGAAGACACATGGCGGCCTGTGAGGAATTTGGGGAT GGCTGCTTGAGCCTCCTGGCCAGGTGTGAGGAGGATGTGGACCTGTTCAGAGAGGTTATCTACACACTCCTGGGA CTCATGATGAACCTGTGTCTTCAGGCTCCCTTTGTCTCTGAGGTTTGGGCTGTGGAGGTGAGCAGAAGGTGCCTG TCTTTACTAAACAGCCAGGATGGAGGAATCCTGACAAGAGCTGCTGGTGTTCTGAGCCGGACCCTTTCTTCCTCT CTGAAAATTGTTGAGGAGGCCTTGCGAGCAGGAGTGGTAAAGAAAATGATGAAATTCCTGAAGACAGGAGGTGAG ACTGCATCACGTTATGCTATAAAGATACTAGCTATCTGCACGAATAGTTATCATGAAGCTCGGGAAGAAGTAATA AGACTGGATAAAAAGTTGAGCGTTATGATGAAGCTGCTCAGCTCGGAGGATGAGGTTCTGGTGGGCAACGCTGCC $\tt CTCTGCCTTGGTAACTGCATGGAGGTGCCCAACGTTGCGTCTTCCCTGCTAAAGACGGACCTTTTGCGGGTCTTG$ TTAAAGCTTGCAGGCAGTGACACACAGAAGACGCCGTGCAGGTGAACGCAGGCATTGCTCTGGGGAAGCTGTGC ACAGCTGAGCCCAGATTTGCTGCTCAACTGAGAAAGCTTCATGGCCTAGAAATTCTCAACTCTACGATGAAATAC ATCAGTGATTCTTGAGAGAGACAGGGTTTGTGTGCATTTGGGGAACACACAGATGCACACCGTGTGTTGTTCCTA

MNSDDPVVQQKAVLETEKRLLIMEEDQEEDECRTTLNKTMISPPQTAMKSAEEINSEAFLASVEKDAKERAKRRR ENKVLADALKEKGNEAFAEGNYETAILRYSEGLEKLKDMKVLYTNRAQAYMKLEDYEKALVDCEWALKCDEKCTK AYFHMGKANLALKNYSVSRECYKKILEINPKLQTQVKGYLNQVDLQEKADLQEKEAHELLDSGKNTAVTTKNLLE TLSKPDQIPLFYAGGIEILTEMINECTEQTLFRMHNGFSIISDNEVIRRCFSTAGNDAVEEMVCVSVLKLWQAVC SRNEENQRVLVIHHDRARLLAALLSSKVLAIRQQSYALLLHLAQTESGRSLIINHLDLTRLLEALVSFLDFSDKE ANTAMGLFTDLALEERFQVWFQANLPGVLPALTGVLKTDPKVSSSSALCQCIAIMGNLSAEPTTRRHMAACEEFG DGCLSLLARCEEDVDLFREVIYTLLGLMMNLCLQAPFVSEVWAVEVSRRCLSLLNSQDGGILTRAAGVLSRTLSS SLKIVEEALRAGVVKKMMKFLKTGGETASRYAIKILAICTNSYHEAREEVIRLDKKLSVMMKLLSSEDEVLVGNA ALCLGNCMEVPNVASSLLKTDLLRVLLKLAGSDTQKTAVQVNAGIALGKLCTAEPRFAAQLRKLHGLEILNSTMK YISDS

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3676/6881 FIGURE 3388

AAATATTCAGGAAACAAAAATCACTCAAACGGAATCGAAGCCTTTTAACAAAGAAAATGAAATACAGATGATGAT GATGATGAAGATGATGCTAAGTAAACAGAAATCAGTACTCCGCATGCGCTCCTCTCCTAAGGTACAAAGCAG CAAGAGGTTAGGGTGGCAAGGCTGCCTCTGGGTCCATTCTGTGGGCCACTCTCCCCAACGTTCTGACACTTCTGC AGTCTGATCAGTGGCGATGCTAGATTATAATTTCAAACTGTGAAGAATAATGGTCTTGTCATTTGCTCAATGTGG TCTAGGGCCTGCACAGATCTCTGGTTCAAATGCACAGGCCCTCAGAATAGAGGAACATGAAGAGAGATCTTAGAG CACACAGTAGAATGTGAGAGCCTGGGTGTCTGAGACCGGGAGGGCCCAGCAGTGAGGGGCAGGCTCTTCTGGTCA ${\tt CCAGGCTGTTCAGTGGACTCAGTTCTTCATCTTGTAATGTCGATGGCTTTGCCACACCCAGGCCCAAGCCCATGCCACCCAGGCCCAAGCCCATGCCACCCAGGCCCAAGCCCATGCCACCAGGCCCAAGCCCATGCCACCCAGGCCCAAGCCCATGCCACCCAGGCCCAAGCCCATGCCACCCAGGCCCAAGCCCAAGCCCATGCCACCCAGGCCCAAGCCCAAGCCCATGCCACACCAGGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCCAAGCCAAGCCAAGCCCAAGCCCAAGCCAAGCCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGCAAGC$ TACCTTGTCAAGACTGTCAAAGTGGTTGTGGTTAGGTCAAACTGGTTTTGGTTCTGATGGTTAGGAAGAAACAGG TCAGCCCTCAGATCACCTGGCCCGGGACAGCTGACCCCCTAGAACCCTGGCTCTGCCATTAGCTAGGACCTAAGA $\tt CTCTGCCCACATTTTGGTCTGTTCTCCCCATTACACATAGGTTTGTCTCAGCATGCAAGAGTTTTTCCTTTAAA$ AAAAAAAAAAAAAAAAAAAAAAAAAGCAATGCTTTCTCTAAAATCAAAGAGGGAGTCATTTTATTCCAAGATGTTT TATCTTTTATGTTAAGAGATCAAAGCTTATAATTTTCTTTTTTAATTTTTGAAGGAGGGATCAACTCCAGTTTCC ${\tt AATGTCTATGTGTCT} \underline{{\tt ATG}} {\tt TGTGTATGTGCCATACATATGTATTCACATGAAGACCGGCATGGCCAAGTTCTGCTG}$ GAGGAGCACTCAAGTGTGACGAGCAGGGCCACTGGACCCTGCAGGGCTGTGGTGTATATAGTGCAGCTTTGGAGG GCGGTTTTCAGACCTCCATTAACATCCCTACCCAGCATTCTGTACTTCGGGGGCCTTCTCTCTTGTTATAAAACT $\tt TTTTACCAAGTGAAACATCGATACCACCTTTGTTTCCATTCTCACTGGTGTAAATAC\underline{\textbf{TGA}}\texttt{GTACTAACTGAGAAT}$ TTTGACTTTGCATTCTGTCGGAATACTTGTGTTCAATAAAATTG

MCVCAIHMYSHEDRHGQVLLEEHSSVTSRATGPCRAVVYIVQLWRWNSIFTLFYGAFRVPGFHLRLSVWMAVFRP PLTSLPSILYFGGLLSCYKTFYQVKHRYHLCFHSHWCKY

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3678/6881 FIGURE 3390

 $\texttt{CCAGGAACGAG} \underline{\textbf{ATG}} \texttt{GCGGTTCTCTGGAGGCTGAGTGCCGTTTGCGGTGCCCTAGGAGGCCGAGCTCTGTTGCTTC}$ AGCACATACACTTGTCACCGAGCCACCATTCTGGCTCCAAGGCTGCATCTCTCCACTGGACTAGCGAGAGGGTTG TCAGTGTTTTGCTCCTGGGTCTGCTTCCGGCTGCTTATTTGAATCCTTGCTCTGCGATGGACTATTCCCTGGCTG CAGCCCTCACTCTTCATGGTCACTGGGGCCTTGGACAAGTTGTTACTGACTATGTTCATGGGGATGCCTTGCAGA AAGCTGCCAAGGCAGGCTTTTGGCACTTTCAGCTTTAACCTTTGCTGGGCTTTGCTATTTCAACTATCACGATG ${\tt TGGGCATCTGCAAAGCTGTTGCCATGCTGTGGAAGCTC} \underline{{\tt TGA}}{\tt CCTTTTTGACTTCATACTTTGAAGAATTGATGTA}$ TGCCTCTTTGCCTCTGCTTTGTCATGCCATTAAGCTCACAATAAGGAAGAAATÄACAGATAAGTCCATTGGTGGA CAGCCTTCTTCTCTTAATCACAAGATTATTTTCAGAATTTAATCTTTGAGGAAAAGGTTTGAGAGGAATTATATC TAAGTTGTGAGACTGAGTTCTATATTCTGGTGAGTTAATGGGGTTGCCTCCCAGCTTCTTATAAGACTCACAGTA TAACTAAACATGATATATCAGCTTTTGCCTTTCAATTTATCAATCTCTTAAAGAGAATCCAACTTTATTACGATT AGTATATGATCAAACTTCCATATTTGCCTTGGGAATAATGGACAAAGGGAAATACTCTTAATTCATGAATAAAAA CTTTGCAGAAAATTAGACAGTGTTTAATTTTCGAAAACTTCCCTCTAGACAGTAGATACCACCTACTGATGGT TACATATACTAGGGAAATTTTAAAATTAGGAAATGCTGATAGCTCATATTATAAATTTCTAAATCCTAGGAAGAA ACGCTTGGAGTGCTTCTGAATATACAGAAGTTCCATTTAAGGGCAAGTTTCCCCGTAGATGTATCAAAATACTAC CAACTGTAAATTGAGATTTAATTCCCAAATGTATTCTACTTGTTCTAAAACAATCTGTCCACAAATATAAAACTA TAAGTAATAAATTGTTATTTTCGCACAATGGGAATCTCTAATGTGAAAATGTATTCTATGAAAATAATTTTTTAA ATAAAATGTTATATAATAAAAGTGTCTTCTATGCTTTT

MAVLWRLSAVCGALGGRALLLRTPVVRPAHISAFLQDRPIPEWCGVQHIHLSPSHHSGSKAASLHWTSERVVSVL LLGLLPAAYLNPCSAMDYSLAAALTLHGHWGLGQVVTDYVHGDALQKAAKAGLLALSALTFAGLCYFNYHDVGIC KAVAMLWKL

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 $\tt CCGTGAGTCTGACCTTAGGTGTCTCGTGTCTGGGGTTGATCCGAGCTGTCGCCGCCGCCGCCGCAAAA$ CGGCCAACTCTCCGGGTTCGGGAGCCCGACCCGACCCGGTGCGGAGCTTCAATCGCTGGAAGAAAAAAACACAGCC ATAGGCAGAACAAAAAGAAGCAGTTGAGGAAGCAACTGAAGAAACCCGAATGGCAGGTCGAGCGCGAGAGTATCA GCCGCCTCATGCAGAACTATGAAAAGATAAATGTAAATGAAATCACAAGATTTTCAGATTTTCCCTTGTCCAAAA AAACATTGAAAGGTTTGCAAGAAGCTCAGTACCGTTTGGTGACTGAGATACAGAAGCAGACCATTGGATTGGCTT TGCAAGGTAAAGATGTACTTGGAGCGGCCAAAACTGGATCTGGCAAGACTCTGGCTTTTCTTGTTCCAGTGCTGG AAGCCTTATATCGTCTGCAATGGACTTCAACAGATGGGCTGGGGGTTCTCATAATATCACCTACGAGAGAACTGG CCTATCAGACCTTTGAGGTTCTCCGAAAAGTAGGAAAGAATCATGACTTCTCAGCTGGTCTCATCATTGGTGGAA AGGATCTAAAACACGAAGCTGAGAGGATCAACAACATAAATATACTCGTGTGCACACCAGGTCGGCTTCTTCAAC ACATGGATGAAACAGTATCTTTTCATGCTACCGACCTCCAAATGTTAGTTCTTGATGAAGCAGATAGAATCTTGG ATATGGGCTTTGCTGATACCATGAATGCTGTTATTGAAAATCTCCCCAAGAAACGTCAGACTTTACTTTCTCAG CAACACAAACTAAATCTGTAAAGGACCTTGCACGCTTGAGTTTGAAAAAACCCTGAGTATGTCTGGGTTCATGAAA AAGCAAAATATAGCACCCCTGCCACTTTGGAACAGAACTACATAGTCTGTGAGCTGCAGCAAAAAAATAAGTGTGC TGTATTCCTTTTTGAGAAGCCATCTGAAGAAGAAGAAGCATTGTATTTTTTTCCAGTTGCAAAGAGGTCCAGTATC TGTACCGAGTGTTTTGCCGGCTACGTCCTGGTGTTTCTATCCTTGCACTCCATGGTCGACAGCAGCAAATGAGAA GAATGGAAGTCTATAATGAGTTTGTCCGTAAGAGAGCTGCAGTACTCTTTGCTACTGATATTGCAGCCAGGGGTC TGGATTTCCCGGCCGTGAATTGGGTTCTTCAGTTTGATTGTCCTGAGGATGCCAACACATATATTCACAGAGCAG GTAGAACTGCCAGGTACAAAGAGGATGGTGAAGCTTTGCTAATTTTGCTACCCTCAGAAAAAGCTATGGTGCAGC TATATCTGATGAAGGATAAAGAAGTATTTGATGTGAGCAAGTTACCTATACCTGAATATGCCCTGTCTCTTGGTC TTGCTGTGGCACCACGCGTAAGATTTCTTCAGAAAATGCAGAAACAACCCACCAAAGAATTGGTAAGGAGCCAAG CCGATAAAGTAATTGAGCCAAGGGCTCCCTCCCTCACCAATGACGAAGTGGAAGAATTTAGAGCCTACTTCAATG ATGAAGAACAGGAAGAAGAAGAAGACGATGAAGAAGAAATGGAAGAGAAACTGGCAAAAGCAAAAGGATCTCAAG CCCCATCTCTTCCTAACACCAGTGAGGCACAGAAGATCAAGGAAGTTCCTACACAGTTCTTGGACAGAGATGAGG AGGAAGAAGATGCTGATTTCTTGAAGGTGAAGCGGCATAATGTGTTTTGGATTGGACCTTAAAGACGAGAAAAACAT AGAGAAATTTTAAAGTGAATAAGAAGATAACATTTACTGATGAAGGGGAGTTGGTTCAGCAGTGGCCACAAATGC AGAAATCTGCCATCAAGGATGCTGAGGAAGATGATGACACAGGTGGTATCAACTTACATAAAGCAAAGGAAAGAC TTCAGGAAGAGGACAAATTTGACAAAGAAGAATATAGGAAAAAAATTAAGGCAAAGCATCGGGAGAAAAGACTGA AAGAAAGGGAAGCCAGAAGAAGCCAACAAGAGACAAGCCAAAGGCCAAAGATGAAGAGGAAGCCTTTCTGGATT GGAGTGATGATGATGATGATGATGATGGATTTGATCCAAGCACACTCCCAGATCCAGATAAATACAGAAGCT TGGATACCGGCCTGTCTTTAGCAGAGGATGAAGAGCTGGTGTTACATCTGCTAAGAAGTCAAAGC<u>TAA</u>ATACTTC $\verb|CTGCGCCTGCCTTCTCCTTGAAACCTTGGTTATGACTGCGTAGGCAAGAAGTTGAAAAACAGTTGATTTGGGGGCC||$ ACTTAGGTACCATATGCCCCATTCCCAAAGGGCACATTTCTGGATAGAAGCGATCGTATCTCCAAGTCCCTCTCA AGCATGTGTTCTGTTAGATTTTTATCCATGGGTTCCTACGCCTTGTCATTGGAAACACTGCCTTTGTCTTACTGG CAAGTTCTGGAGCTCTTGTGTCATTGTTAGAAATCCCTGTCTTGCTTACTGTACAGAAGTTTCTGTTGCTGTTAA

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GGGCTGGCGACTCTGCTCCTCCGCTTGCTGCTGTCTCTGGGAACTGGGTGCCAGCGCTGAGGGGCTTCCAGCGGA ATCCCCTGGGGTGGCAGCAGCAGTAGCGGAAGACGGAGGCCTCAAAAAGTGTAAAATCTCCAGCTATTGCAGATC TGCAGGTCCTGATGAAGTTGTAGGGCCAGAAGGAATGGAAAAATTTTGTGAAGACATTGGTGTTGAACCTGAAAA TATTATTATGTTAGTTTTAGCGTGGAAATTGGAGGCTGAAAGCATGGGATTTTTTACCAAGGAAGAATGGTTAAA GGGAATGACTTCATTACAGTGTGACTGCACAGAAAAGTTACAAAACAAATTTGACTTTTTTGCGCTCACAGTTGAA TGATATTTCGTCATTTAAGAATATCTACAGATATGCCTTTGATTTTGCAAGGGATAAAGATCAGAGAAGCCTTGA TATTGATACTGCTAAATCTATGTTAGCTCTTCTGCTTGGGAGGACATGGCCACTGTTTTCAGTATTTTACCAGTA CCTGGAGCAATCAAAGTATCGTGTTATGAACAAAGATCAATGGTACAATGTATTAGAATTCAGCAGAACAGTCCA TGCTGATCTTAGTAACTATGATGAAGATGGTGCTTGGCCTGTTCTTCTTGATGAATTTGTTGAGTGGCAAAAAGT $\verb|CCGTCAGACATCATAGCAAGAACTATGTGAAGAAAATGCAAACCTTTCAATTCCCACGTGTATACAAGCTAATGT|\\$ TTTTAAAGGAGGTTTTTCTTGTTACATGTGATGGGCATTGAGCCACACCTCTTCTTAGACTGAATATTGAAGTTT AAAAAAAAAA

MPVKKKRKSPGVAAAVAEDGGLKKCKISSYCRSQPPARLISGEEHFSSKKCLAWFYEYAGPDEVVGPEGMEKFCE DIGVEPENIIMLVLAWKLEAESMGFFTKEEWLKGMTSLQCDCTEKLQNKFDFLRSQLNDISSFKNIYRYAFDFAR DKDQRSLDIDTAKSMLALLLGRTWPLFSVFYQYLEQSKYRVMNKDQWYNVLEFSRTVHADLSNYDEDGAWPVLLD EFVEWQKVRQTS

CCCAGCCCGGCCCGCCCCGGCTGCGCACGCGACGCCCCTCCAGGCCCCGCTCCTGCGCCCTATTTGGTCA AGCCGCTCTCGCCGCCACCTCGGCTGGGAGCCCACGAGGCTGCCGCATCCTGCCCTCGGAACAATGGGACTC GGCGCGCGAGGTGCTTGGGCCGCCGCTGCTCCTGGGGACGCTGCAGGTGCTAGCGCTGCTGGGGGGCCGCCCATGAA AGCGCAGCCATGGCGGAGACTCTCCAACATGTGCCTTCTGACCATACAAATGAAACTTCCAACAGTACTGTGAAA CCACCAACTTCAGTTGCCTCAGACTCCAGTAATACAACGGTCACCACCATGAAACCTACAGCGGCATCTAATACA ACAACACCAGGGATGGTCTCAACAAATATGACTTCTACCACCTTAAAGTCTACACCCAAAACAACAAGTGTTTCA CAGAACACATCTCAGATATCAACATCCACAATGACCGTAACCCACAATAGTTCAGTGACATCTGCTGCTTCATCA ATTGTATTAACGCTGGGAGTTTTATCTATTCTTTACATTGGATGCAAAATGTATTACTCAAGAAGAGGCATTCGG TATCGAACCATAGATGAACATGATGCCATCATTTAAGGAAATCCATGGACCAAGGATGGAATACAGATTGATGCT GCCCTATCAATTAATTTTGGTTTATTAATAGTTTAAAACAATATTCTCTTTTTGAAAAATAGTATAAACAGGCCAT GCATATAATGTACAGTGTATTACGTAAATATGTAAAGATTCTTCAAGGTAACAAGGGTTTGGGTTTTGAAATAAA TTTTTTGGCTGGGGTGGGGGCATTGGTCACATATGACCAGTAATTGAAAGACGTCATCACTGAAAGACAGAATGC CATCTGGGCATACAAATAAGAAGTTTGTCACAGCACTCAGGATTTTGGGTATCTTTTGTAGCTCACATAAAGAAC TTCAGTGCTTTTCAGAGCTGGATATATCTTAATTACTAATGCCACACAGAAATTATACAATCAAACTAGATCTGA AGCATAATTTAAGAAAAACATCAACATTTTTTGTGCTTTAAACTGTAGTAGTTGGTCTAGAAACAAAATACTCCA AGAAAAAGAAAATTTTCAAATAAAACCCAAAATAATAGCTTTGCTTAGCCCTGTTAGGGATCCATTGGAGCATTA AGGAGCACATATTTTTATTAACTTCTTTTGAGCTTTCAATGTTGATGTAATTTTTGTTCTCTGTGTAATTTAGGT AAACTGCAGTGTTTAACATAATGTTTTAAAGACTTAGTTGTCAGTATTAAATAATCCTGGCATTATAGGGAA AAAACCTCCTAGAAGTTAGATTATTTGCTACTGTGAGAATATTGTCACCACTGGAAGTTACTTTAGTTCATTTAA TTTTAATTTTATATTTTGTGAATATTTTAAGAACTGTAGAGCTGCTTTCAATATCTAGAAATTTTTAATTGAGTG TAAACACACCTAACTTTAAGAAAAAGAACCGCTTGTATGATTTTCAAAAGAACATTTAGAATTCTATAGAGTCAA AACTATAGCGTAATGCTGTGTTTATTAAGCCAGGGATTGTGGGACTTCCCCCAGGCAACTAAACCTGCAGGATGA AAATGCTATATTTTCTTCATGCACTGTCGATATTACTCAGATTTGGGGAAATGACATTTTTATACTAAAACAAA TTTGGATATTCCCTCAAATCCCTCCTCTTACTCCATGCTGAAGGAGAAGTACTCTCAGATGCATTATGTTAATGG AGAGAAAAAGCACAGTATTGTAGAGACACCAATATTAGCTAATGTATTTTGGAGTGTTTTCCATTTTACAGTTTA TATTCCAGCACTCAAAACTCAGGGTCAAGTTTTAACAAAAGAGGTATGTAGTCACAGTAAATACTAAGATGGCAT TTCTATCTCAGAGGGCCAAAGTGAATCACACCAGTTTCTGAAGGTCCTAAAAATAGCTCAGATGTCCTAATGAAC ATGCACCTACATTTAATAGGAGTACAATAAAACTGTTGTCAGCTTTTGTTTTACAGAGAACGCTAGATATTAAGA ATTTTGAAATGGATCATTTCTACTTGCTGTGCATTTTAACCAATAATCTGATGAATATAGAAAAAAATGATCCAA **AATATGGATATGATTGGATGTATGTAACACATACATGGAGTATGGAGGAAATTTTCTGAAAAAATACATTTAGATT** AGTTTAGTTTGAAGGAGGGGGGGGGGTGATGGCTGAGTTGTATGTTACTAACTTGGCCCTGACTGGTTGTGCAACC ${\tt ATTGCTTCATTTCTTTGCAAAATGTAGTTAAGATATACTTTATTCTAATGAAGGCCTTTTAAATTTTGTCCACTGC}$ TCTTTAGCACTTTGAAGATAGAAAAACCACTTTTTAAGTACTAAGTCATCATTTGCCTTGAAAGTTTCCTCTGCA ACTTTGAATGTAGGTTTTTTTGTTGTTATTATAAAAATTGAGGGAAATGGTTATGCAAAAAAATATTTTGC ATCAAAACAATCCAGATGTATAAGTACTAGGCAGAAGCCAATTTTAAAATTTCCTTGAATAATCCATGAAA TTAAACTCTTCTTTTCTTTTTATTATAATGACCAGCTTTTGGTATTTCATTGTTACCAAGTTCTATTTTTAGAAT AAAATTGTTCTCCTTCTAAAA

CACACAGCCTACTTTCCAAGCGGAGCCATGTTTGGTAACGGCAATGCGGCTGCAACGGCGGAAGAAAACAGCCCA AAGATGAGAGTGATTCGCGTGGGTACCCGCAAGAGCCAGCTTGCTCGCATACAGACGGACAGTGTGGTGGCAACA TTGAAAGCCTCGTACCCTGCCCTGCAGTTTGAAATCATTGCTATGTCCACCACAGGGGACAAGATTCTTGATACT GCACTCTCTAAGATTGGAGAAAAGCCTGTTTACCAAGGAGCTTGAACATGCCCTGGAGAAGAATGAAGTGGAC CTGGTTGTTCACTCCTTGAAGGACCTGCCCACTGTGCTTCCTCCTGGCTTCACCATCGGAGCCATCTGCAAGCGG GAAAACCCTCATGATGCTGTTGTCTTTCACCCAAAATTTGTTGGGAAGACCCTAGAAACCCTGCCAGAGAAGAGT GTGGTGGGAACCAGCTCCCTGCGAAGAGCCCCAGCTGCAGAGAAAGTTCCCGCATCTGGAGTTCAGGACGGGG GAAACCTCAACACCCGGCTTCGGAAGCTGGACTATTATCTCGAGTTCAGTGCCATCATCCTGGCAACAGCTGGCC TGCAGCGCATGGGCTGGCACAACCGGGTGGGGCAGATCCTGCACCCTGAGGAATGCATGTATGCTGTGGGCCAGG ATACAGCTATGAAGGATGGGCAACTGTACCTGACTGGAGGAGTCTGGAGTCTAGACGGCTCAGATAGCATACAAG AGACCATGCAGGCTACCATCCATGTCCCTGCCCAGCATGAAGATGGCCCTGAGGATGACCCACAGTTGGTAGGCA TCACTGCTCGTAACATTCCACGAGGGCCCCAGTTGGCTGCCCAGAACTTGGGCATCAGCCTGGCCAACTTGTTGC TGAGCAAAGGAGCCAAAAACATCCTGGATGTTGCACGGCAGCTTAACGATGCCCATTAACTGGTTTGTGGGGCAC ${\tt AGATGCCTGGGTTGCTGTCCAGTGCCTACATCCCGGGCCTCAGTGCCCCATTCTCACTGCTATCTGGGGAGT}$ GATTACCCCGGGAGACTGAACTGCAGGGTTCAAGCCTTCCAGGGATTTGCCTCACCTTGGGGCCTTGATGACTGC $\tt CTTGCCTCCTCAGTATGTGGGGGCTTCATCTCTTTAGAGAAGTCCAAGCAACAGCCTTTGAATGTAACCAATCCT$ ACTAATAAACCAGTTCTGAAGGT

ACAGCAGTTACACTGCGGCGGCGTCTTCTAGTGTTTTGAGCCGTCGTGCTTCACCGGTCTACCTCGCTAGCAT GTCGGGCCGCGAAGACTGGCGGCAAGGCCCAAGGCCAAGTCGCGCTCGTCGCGCCCCGGCCTCCAGTT CCCAGTGGGCCGTGTACACCGGCTGCTGCGGAAGGGCCACTACGCCGAGCGCGTTGGCGCCGGCGCGCCAGTGTA CCTGGCGGCAGTGCTGGAGTACCTCACCGCTGAGATCCTGGAGCTGGCGGGCAATGCGGCCCGCGACAACAAGAA GACGCGAATCATCCCCCGCCACCTGCAGCTGGCCATCCGCAACGACGAGGAGCTCAACAAGCTGCTGGGCGGCGT GACGATCGCCCAGGGAGGCGTCCTGCCCAACATCCAGGCCGTGCTGCTGCCCAAGAAGACCAGCGCCACCGTGGG GCCGAAGGCGCCCTCGGGCGGCAAGAAGGCCACCCAGGCCTCCCAGGAGTACTAAGAGGGCCCGCGCGGCCG GCCGCCAGGCCTCCCCATGCCACACAAGCCCTTTTTTAAGGGCCACCACCGCCCTCATGGAAAGAGCTGAGCCG GAGTCCCCGCCCCGCTCCCGTCCCGCACCGCCTCGCGCTCGGCCCTGCCCTGTCCGCCGTCC GCCCTCCGGTAGGGTTCGGGCCTTCCGGATGCGGCTTGGGCGCTCTTCGGGGACCTCCGTGGCGCGGAAGACCCG CGCTAAGGGGCTGCGGGGAGGCCGCAGCACCTTCTGGAAGACTTGGCCTTCCGCTCTGACGCAGGGCCGAGGTGG GCAGTCCAGGCCGAGAGGCCGGCCCTGAAGGTGAGGCCCTCGGCAGCTGCAGCCGGGGTGTCTGGTAC TCATAGGTCTGCGCTGGGGCCGGACGAACCACTTGGTAACAGGCACATCTTCCTCCCGAGTGACTGCCTCCTAG GCGGAAGCCGACTGGCAGCCAGGCCTGTCGGGCCCCCCGACGCCCCCATTTCCCTTCCAGCAAACTCAACTCG GCAATCCAAGCACCTAGATACCAGCACAAGTCGGTTAATCCCTGTCTGGACTGAGCCTCCGTTGGCTTCTGAACT GGAATTCTGCAGCTAACCCTTCCACGACTAGAACCTTAGGCATTGGGGAGTTTTAGATGGACTAATTTTATTAAA GGATTGTTTTTTTT

CGGAATTGCCCATGCCGCTGATCAATTTGATCGTCTCGCTGCTGGGATTTGTGGCCACAGTCACCCTCATCC $\tt CGGCCTTCGGGGGCCACTTCATTGCTGCGCGCCTCTGTGGTCAGGACCTCAACAAAACCAGCCGACAGCAGATCC$ CAGAATCCCAGGGAGTGATCAGCGGTGCTGTTTTCCTTATCATCCTCTTCTGCTTCATCCCTTTCCCCTTCCTGA ACTGCTTTGTGAAGGAGCAGTGTAAGGCATTCCCCCACCATGAATTTGTGGCCCTGATAGGTGCCCTCCTTGCCA TCTGCTGCATGATCTTCCTGGGCTTTGCGGATGATGTACTGAATCTGCGCTGCGCCCATAAGCTGCTGCTACATA CAGCTGCCTCACTACCTCCTCATGGTATATTTCACCAACTTTGGCAACACGACCATTGTGGTGCCCAAGCCTT TCCGCCCGATACTTGGCCTGCATCTGGACTTGGGAATCCTGTACTATGTCTACATGGGGCTGCTGCAGTGTTCTG TACCAATGCCATCAATATCCTAGCAGGAATTAACGGCCTAGAGGCTGGCCAGTCACTAGTCATTTCTGCTTCCAT ${\tt CATTGTCTTCAACCTGGTAGAGTTGGAAGGTGATTGTCGGGATGATCATGTCTTTTCCCTCTACTTCATGATACC}$ CTTTTTTTCACCACTTTGGGATTGCTCTACCACAACTGGTACCCATCACGGGTGTTTGTGGGAGATACCTTCTG TTACTTTGCTGGCATGACCTTTGCCGTGGTGGGCATCTTGGGACACTTCAGCAAGACCATGCTACTATTCTTCAT GCCCCAGGTGTTCAACTTCCTCTACTCACTGCCTCAGCTCCTGCATATCATCCCCTGCCCTCGCCACCGCATACC CACCTTTATTTTAAAGGTGGCAGAGAGCCTCCAGCTGGTGACAGTACACCAGAGTGAGACTGAAGATGGTGAATT CACTGAATGTAACAACATGACCCTCATCAACTTGCTACTTAAAGTCCTTGGGCCCATACATGAGAGAAACCTCAC ATTGCTCCTGCTGCTGCAGATCCTGGGCAGTGCCATCACCTTCTCCATTCGATATCAGCTCGTTCGACTCTT $\verb|CTATGATGTCTGAGTCCTTGATCATTGTCCTTTACCTCACAGTCTCTAGGATTCCTGACTCAGGCTGACCTCTC| \\$ TCTCTGGTCCCAGACTGCCTCCTTGCCCAGGCCTCTCTCACTCTTCATACTCCTCCAGATTTTGTTCTCAGCATT $\tt TTCCTTTCTCTGTGATCATTGGCATCCTGGGCGTTTCTTGCCCTCTGCTGACTACTGATTTGCATTTTACCTATGG$ $\tt TTGCAGTTATCCACACTCACATTTCAGAGTCCTGACTCTCAAGGAACCACTGGTTTTTGGGATAGAACTTGGGCC$ AGGGCTAGGAACACAGGCTCCACGGTGACATGTCATTTGATTGTAAATTAAGTGTTCTGATTAGTAAGAACTAAG CAGGGGGCCACATGCTCTCAATGGAGACAATAAAGTGTTGTCTTTTTCTT

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 ${\tt MVDYYEVLGVQRHASPEDIKKAYRKLALKWHPDKNPENKEEAERKFKQVAEAYEVLSDAKKQDIYDKYGKEGLNG} GGGGGSHFDSPFEFGFTFRNPDDVFREFFGGRDPFSFDFFEDPFEDFFGNRRGPRGSRSRGTGSFFSVFSGFPSFRSGFSSFDTGFTSFGSLGHGGLTSFSSTSFGGSGMGNFKRISTSTKMVNGRKITTKRIVENGQERVEVEEDGQLKSLTINGKEQLLRLDNK$

1

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AQ

 ${\tt MVQQHDEPILKHLKDTKVKLSDADQPMNFVLEFHFEPNEYFTNEMLSKTYRMRSEPDDSDPFSFDGPEIMGCTGC} \\ {\tt QIDWKKGKNVTLKTIKKKQKHKGSGTVHTVTESGDLDDDAEILAQTSK} \\$

GAGGGCAGAATTTCAACCTTCGGTGTGCTTGGGAGTGCCGATTGTGATTTACACGACAAAATGCCGAGGTGCTCG TTCAACTTGCTGTGAATAGAGTAACTGAAGAAGCAGTCGCAGTGAAGATTGTAGATATGAAGCGTGCCGTAGACT GTCCAGAAAATATTAAGAAAGAGATCTGTATCAATAAAATGCTAAAATCATGAAAATGTAGTAAAATTCTATGGTC ACAGGAGAGAGGCAATATCCAATATTTATTTCTGGAGTACTGTAGTGGAGGAGAGCTTTTTGACAGAATAGAGC CAGACATAGGCATGCCTGAACCAGATGCTCAGAGATTCTTCCATCAACTCATGGCAGGGGTGGTTTATCTGCATG GTATTGGAATAACTCACAGGGATATTAAACCAGAAAATCTTCTGTTGGATGAAAGGGATAACCTCAAAATCTCAG ACTTTGGCTTGGCAACAGTATTTCGGTATAATAATCGTGAGCGTTTGTTGAACAAGATGTGTGGTACTTTACCAT ATGTTGCTCCAGAACTTCTGAAGAGAGAGAGATTTCATGCAGAACCAGTTGATGTTTGGTCCTGTGGAATAGTAC TTACTGCAATGCTCGCTGGAGAATTGCCATGGGACCAACCCAGTGACAGCTGTCAGGAGTATTCTGACTGGAAAG AAAAAAAACATACCTCAACCCTTGGAAAAAAATCGATTCTGCTCCTCTAGCTCTGCTGCATAAAATCTTAGTTG CAAAAAGGCCCCGAGTCACTTCAGGTGGTGTGTCAGAGTCTCCCAGTGGATTTTCTAAGCACATTCAATCCAATT TGGACTTCTCCCAGTAAACAGTGCTTCTAGTGAAGAAAATGTGAAGTACTCCAGTTCTCAGCCAGAACCCCGCA CAGGTCTTTCCTTATGGGATACCAGCCCCTCATACATTGATAAATTGGTACAAGGGATCAGCTTTTCCCAGCCCA CATGTCCTGATCATATGCTTTTGAATAGTCAGTTACTTGGCACCCCAGGATCCTCACAGAACCCCTGGCAGCGGT TGGTCAAAAGAATGACACGATTCTTTACCAAATTGGATGCAGACAAATCTTATCAATGCCTGAAAGAGACTTGTG AGAAGTTGGGCTATCAATGGAAGAAAAGTTGTATGAATCAGGTTACTATATCAACAACTGATAGGAGAAACAATA **AACTCATTTTCAAAGTGAATTTGTTAGAAATGGATGATAAAATATTGGTTGACTTCCGGCTTTCTAAGGGTGATG** $\tt TTCCTGCCACA\underline{TGA} \tt TCGGACCATCGGCTCTGGGGGAATCCTGGTGAATATAGTGCTGCTATGTTGACATTATTCTT$ CCTAGAGAAGATTATCCTGTCCTGCAAACTGCAAATAGTAGTTCCTGAAGTGTTCACTTCCCTGTTTATCCAAAC ATCTTCCAATTTATTTTGTTTGTTCGGCATACAAATAATACCTATATCTTAATTGTAAGCAAAACTTTGGGGAAA GGATGAATAGAATTCATTTGATTATTTCTTCATGTGTGTTTTAGTATCTGAATTTGAAACTCATCTGGTGGAAACC AAGTTTCAGGGGACATGAGTTTTCCAGCTTTTATACACACGTATCTCATTTTTATCAAAACATTTTGTTTAATTC ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVAVKIVDMKRAVDCPENIKKEICINKMLNHENVVKFYGHRR EGNIQYLFLEYCSGGELFDRIEPDIGMPEPDAQRFFHQLMAGVVYLHGIGITHRDIKPENLLLDERDNLKISDFG LATVFRYNNRERLLNKMCGTLPYVAPELLKRREFHAEPVDVWSCGIVLTAMLAGELPWDQPSDSCQEYSDWKEKK TYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRWYNKPLKKGAKRPRVTSGGVSESPSGFSKHIQSNLDF SPVNSASSEENVKYSSSQPEPRTGLSLWDTSPSYIDKLVQGISFSQPTCPDHMLLNSQLLGTPGSSQNPWQRLVK RMTRFFTKLDADKSYQCLKETCEKLGYQWKKSCMNQVTISTTDRRNNKLIFKVNLLEMDDKILVDFRLSKGDGLE FKRHFLKIKGKLIDIVSSQKVWLPAT

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 $\tt CTGCAGCTCTTGGGTTTTTTGTGGCTTCCTTCGTTATTGGAGCCAGGCCTACACCCCAGCAACCATGTCCAAGGG$ ACCTGCAGTTGGTATTGATCTTGGCACCACCTACTCTTGTGTGGGTGTTTTCCAGCACGGAAAAGTCGAGATAAT TGCCAATGATCAGGGAAACCGAACCACTCCAAGCTATGTCGCCTTTACGGACACTGAACGGTTGATCGGTGATGC CGCAAAGAATCAAGTTGCAATGAACCCCACCAACACAGTTTTTGATGCCAAACGTCTGATTGGACGCAGATTTGA TGATGCTGTTGTCCAGTCTGATATGAAACATTGGCCCTTTATGGTGGTGAATGATGCTGGCAGGCCCAAGGTCCA AGTAGAATACAAGGGAGAGACCAAAAGCTTCTATCCAGAGGAGGTGTCTTCTATGGTTCTGACAAAGATGAAGGA AATTGCAGAAGCCTACCTTGGGAAGACTGTTACCAATGCTGTGGTCACAGTGCCAGCTTACTTTAATGACTCTCA GCGTCAGGCTACCAAAGATGCTGGAACTATTGCTGGTCTCAATGTACTTAGAATTATTAATGAGCCAACTGCTGC TTTTGATGTGTCAATCCTCACTATTGAGGATGGAATCTTTGAGGTCAAGTCTACAGCTGGAGACACCCACTTGGG TGGAGAAGATTTTGACAACCGAATGGTCAACCATTTTATTGCTGAGTTTAAGCGCAAGCATAAGAAGGACATCAG TGAGAACAAGAGGGCTGTAAGACGCCTCCGTACTGCTTGTGAACGTGCTAAGCGTACCCTCTCTTCCAGCACCCA GGCCAGTATTGAGATCGATTCTCTTATGAAGGAATCGACTTCTATACCTCCATTACCCGTGCCCGATTTGAAGA ACTGAATGCTGACCTGTTCCGTGGCACCCTGGACCCAGTAGAGAAAGCCCTTCGAGATGCCAAACTAGACAAGTC ACAGATTCATGATATTGTCCTGGTTGGTGGTTCTACTCGTATCCCCAAGATTCAGAAGCTTCTCCAAGACTTCTT CAATGGAAAAGAACTGAATAAGAGCATCAACCCTGATGAAGCTGTTGCTTATGGTGCAGCTGTCCAGGCAGCCAT CTTGTCTGGAGACAAGTCTGAGAATGTTCAAGATTTGCTGCTCTTGGATGTCACTCCTCTTTCCCTTGGTATTGA AACTGCTGGTGGAGTCATGACTGTCCTCATCAAGCGTAATACCACCATTCCTACCAAGCAGACACAGACCTTCAC TACCTATTCTGACAACCAGCCTGGTGTGCTTATTCAGGTTTATGAAGGCGAGCGTGCCATGACAAAGGATAACAA CCTGCTTGGCAAGTTTGAACTCACAGGCATACCTCCTGCACCCCGAGGTGTTCCTCAGATTGAAGTCACTTTTGA CATTGATGCCAATGGTATACTCAATGTCTCTGCTGTGGACAAGAGTACGGGAAAAGAGAACAAGATTACTATCAC TAATGACAAGGGCCGTTTGAGCAAGGAAGACATTGAACGTATGGTCCAGGAAGCTGAGAAGTACAAAGCTGAAGA TGAGAAGCAGAGGGACAAGGTGTCATCCAAGAATTCACTTGAGTCCTATGCCTTCAACATGAAAGCAACTGTTGA AGATGAGAAACTTCAAGGCAAGATTAACGATGAGGACAAACAGAAGATTCTGGACAAGTGTAATGAAATTATCAA CTGGCTTGATAAGAATCAGACTGCTGAGAAGGAAGAATTTGAACATCAACAGAAAGAGCTGGAGAAAGTTTGCAA CCCCATCATCACCAAGCTGTACCAGAGTGCAGGAGGCATGCCAGGAGGAATGCCTGGGGGGATTTCCTGGTGGTGG AGCTCCTCCCTCTGGTGGTGCTTCCTCAGGGCCCACCATTGAAGAGGTTGATTAA

GACTGCTAGGCGAGGAGAGGGGAGGGGGGGGAGGAGACAGGGCTACTGCAGGCGCAGAGCTGGGGGCAGCCGGGG GCCCGAGTGGCTGAGGCTGGTCCCGCAGCGGCCGCTTGCCGGCGTTCTGGCTCCTGTGGCCTCACCAGGAAGCGT CAGAGTCCCGACACTGGGGAAGCTCGGAGCGCCGCCTCCGCTGCCGCCCCCCCGCCTCCTGGCTCTGGGTCCCCGA GCCCCTCCCTGGCCAGCCCGACTCCTCCTCCTTCCCGAACCATCCGGCTCGGGCTCCTTCCCTGGCGATGG $\tt CTGGCCGCTGAGCCATGGCTCAGTACGGCCACCCCAGTCCGCTCGGC{\color{red} ATG} GCTGCGAGAGAGGAGCTGTACAGCA \\$ AAGTCACCCCCGGAGGAACCGCCAACAGCGCCCCCGGCACCATCAAGCATGGATCGGCCGCTGGACGTGCTCCTCT CCATGGGGTTCCCCAGAGCCCGCGCACAAAAAGCCTTGGCATCCACGGGAGGAAGAAGTGTTCAGGCAGCATGTG ACTGGTTATTCTCCCATGTCGGTGACCCCTTCCTGGATGACCCCCTGCCCCGGGAGTACGTCCTCTACCTCCGTC CCACCGGCCCTTAGCACAGAAGCTTTCCGACTTTTGGCAGCAGTCGAAGCAGATCTGCGGGAAGAACAAGGCAC ACAACATCTTCCCCCACATCACACTCTGCCAGTTCTTTATGTGCGAGGACAGCAAGGTGGATGCCCTGGGGGAAG CCCTGCAGACCACGGTCAGTCGCTGGAAATGTAAGTTCTCGGCCCCGCTGCCCCTGGAGCTCTATACGTCGTCCA ACTTCATCGGCCTCTTTGTAAAGGAAGACAGTGCGGAGGTCCTCAAGAAGTTTGCTGCTGACTTTGCTGCAGAGG CTGCATCCAAAACCGAAGTGCATGTGGAACCTCATAAGAAGCAGCTACATGTGACCCTGGCTTACCACTTCCAAG CCAGCCACCTACCCACCCTAGAGAAACTGGCCCAGAACATTGACGTCAAGCTAGGGTGTGACTGGGTGGCTACCA TATTTTCTCGGGATATCCGATTTGCTAACCATGAGACATTACAGGTCATCTACCCCTATACCCCACAAAATGACG ATGAGCTGGAGCTGGTCCCCGGGGACTTCATCTTCATGTCTCCAATGGAGCAGACCAGCACCAGCGAGGGTTGGA GCACCTGGATATTCATGGTTCTTATTCAATCTTAAATACATCGTCATCCAACTCTCTCACGTTTGGGGATGGAG TATTGGAGAGGCGGCCTTATGAGGACCAGGGGCTCGGGGAGACGACTCCTCTTACTATCATCTGCCAGCCCATGC AGCCGCTGAGGGTCAACAGCCAGCCCGGCCCCCAGAAGCGATGCCTTTTTGTGTGTCGGCATGGTGAGAGGATGG ATGTTGTGTTTGGGAAGTACTGGCTGTCCCAGTGCTTCGATGCCAAAGGCCGCTACATACGCACCAACCTGAACA TGCCTCATAGTTTACCTCAGCGGAGTGGTGGTTTCCGAGATTACGAGAAAGATGCTCCCATCACTGTGTTTGGAT GCATGCAAGCAAGACTAGTGGGTGAAGCCTTATTAGAGAGCAATACCATTATCGATCATGTCTATTGCTCCCCGT CCCTTCGCTGCGTTCAGACTGCACACAATATCTTGAAAGGTTTACAACAAGAAAATCACTTGAAGATCCGTGTAG AGCCCGGCTTATTTGAGTGGACAAAATGGGTTGCTGGGAGCACATTACCTGCATGGATACCTCCATCAGAGTTAG CTGCAGCCAACCTGAGTGTTGATACAACCTACAGACCTCACATTCCAATCAGCAAATTAGTTGTTTCAGAATCCT ATGATACTTATATCAGTAGAAGTTTCCAAGTAACAAAAGAAATAATAAGTGAATGTAAAAGTAAAGGAAATAACA TCCTGATTGTGGCCCACGCATCTTCCCTTGAAGCGTGTACCTGCCAACTTCAGGGCCTGTCACCTCAGAACTCCA AGGACTTCGTACAAATGGTCCGAAAGATCCCATATCTGGGATTTTGTTCCTGTGAAGAATTAGGAGAAACTGGAA TGCTTCAAGAA<u>TAA</u>ACCACACCAGTGAACAAGAAGGAAAGGCCTTTTGGAGTGTGTCTTTCTGTGTGTTTTAAAA ACAGTGGGAAAATCCACACCACCACTCTAAGTGGACAGCTCAGAATAATTTAGCATATTTCCTTTCACACTTAAAG TTCTTAAGATGAGACTGTGTAAATGAGAGAAAGACTTGATTCAGAGGAAAAAAATGTGTTCTCTCTGGACTCTTG CCTAGCTCACAAGGCTTTGGAGAATTGTCTTCCTAAATCGGGGCACCTGCTACAGAAGAGAATGTTTCGTTCCCT CTGGGTATGCACAGCTAAGGGGCCTCATTTCTCCCAGAGGGAGCTGCTGGCCCGCTCTAAGGGGTGCAAGAGGAA TTTCCAGTTAGGTAGAGCCAAGCTGAGGAATCCTTTTAAGATTATTAGAAAACATGCCCTGAAGAGAGTTGTTCT TGCTAACATTTACCCTGGTACTGCCACATTTTCTCTAGAGCAGCTGGCCCTTCTTGCTACAGCCCTATCCCCCCT CCTTGCTTCTGTGAAATGGGGAGACAAAGCACTTTTGCTCTCCAAAGCACTTTTGGATACTCAGGAGGAAAGATA AGATACATGTTTGAAGTATTCAATCATAGGAGCAAAGAACTTGCAAAATATGAAGTGACTTGGAATTAACCATGT TGTAGCCTAACGTGCTACTGCATTTCTAAATCATCAATATTTGCTTGTCTTTTGCCCCTAGACTCTAGACTATGTT AACTAGTTAAGGATGTTACATTTTGAAAGGATGTATGTTAGATATATTATTTGCAGCAAGAAGTTCATTCTGTGC **AATATGGACATGTTTGCAAACCATACCAAGGGTCAGGTTGTTGTACACTTACAGTACGTGTCAACCATAATGGAA** CATCCACAAATGCATCAATTATACCAGGGATGTATAGTAAGTCAGGGAACTAATATAAATGATGACAGTCATGGC ТАААТGАСААТСАААССААААААААААААААААА

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GAAGGCACCCCCATTCCCACCCTGTGCCTTCCTTGCGGGCAGAGAGGGAGAAAGGGCTCCCCAGATCTACACCC CTCCCTCCTGCATCTCCCCTGGAGTGTTCACTTGCAAGCTGCCAAAACATGATGGCCTGTGGTTGTTCTGTTGAA CTCCTTGAACGTTTAGACCCTGCACACATCTGGAAGGAGCTGGCCCCTCAGTCCCTTACTCCCCAACAAGGG GCTCACTATCCCCAAAGAAGGAGCTGTTGGGGACCCACGACGCCCCTGTACTGGATTACAGCATATTCTCAT CTCTGGCCCCGAGGCTGCCTGTGGGGCGAGTGGAGACCTCCCATCACTG

MCSPVPGTQGYRDVIIEHLLHTKHHAGHKVDAKRGQVQPTKTLRVRVRLPDGQVTEESLQADSDADSISLELRKP DGTLVSFTADFKKDVKVFRALILGELEKGQSQFQALCFVTQLQHNEIIPSEAMAKLRQKNPRAVRQAEEVRGLEH LHMDVAVNFSQGALLSPHLHNVCAEAVDAIYTRQEDVRFWLEQGVDSSVFEALPKASEQAELPRCRQVGDHGKPC VCRYGLSLAWYPCMLKYCHSRDRPTPYKCGIRSCQKSYSFDFYVPQRQLCLWDEDPYPG

 $\verb|CTATCCTGAACCCCAGCAAGCCTGAAACAGCTCAGCCAAGCACCCTGCG| \textbf{ATC} \\ \texttt{GAAGCTGCAGATGCCTCCAGGAG} \\$ CAACGGGTCGAGCCCAGAAGCCAGGGATGCCCGGAGCCCGTCGGGCCCCAGTGGCAGCCTGGAGAATGGCACCAA GGCTGACGGCAAGGATGCCAAGACCACCAACGGGCACGGCGGGGGGGCAGCTGAGGGCAAGAGCCTGGGCAGCGC CCTGAAGCCAGGGGAAGGTAGGAGCGCCCTGTTCGCGGGCAATGAGTGGCGGCGACCCATCATCCAGTTTGTCGA GTCCGGGGACGACAAGAACTCCAACTACTTCAGCATGGACTCTATGGAAGGCAAGAGGTCGCCGTACGCAGGGCT CCAGCTGGGGGCTGCCAAGAAGCCACCCGTTACCTTTGCCGAAAAGGGCGAGCTGCGCAAGTCCATTTTCTCGGA GTCCCGGAAGCCCACGGTGTCCATCATGGAGCCCGGGGAGACCCGGCGGAACAGCTACCCCCGGGCCGACACGGG CCTTTTTCACGGTCCAAGTCCGGCTCCGAGGAGGTGCTGTGCGACTCCTGCATCGGCAACAAGCAGAAGGCGGT CAAGTCCTGCCTGGTGTGCCAGGCCTCCTTCTGCGAGCTGCATCTCAAGCCCCACCTGGAGGGCGCCGCCTTCCG AGACCACCAGCTGCTCGAGCCCATCCGGGACTTTGAGGCCCGCAAGTGTCCCGTGCATGGCAAGACGATGGAGCT CTTCTGCCAGACCGACCAGACCTGCATCTGCTACCTTTGCATGTTCCAGGAGCACAAGAATCATAGCACCGTGAC AGTGGAGGAGGCCAAGGCCGAGAAGGAGCCGAGCTGTCACTGCAAAAGGAGCAGCTGCAGCTCAAGATCATTGA GATTGAGGATGAAGCTGAGAAGTGGCAGAAGGAGAAGGACCGCATCAAGAGCTTCACCACCAATGAGAAGGCCAT CCTGGAGCAGAACTTCCGGGACCTGGTGCGGGACCTGGAGAAGCAAAAGGAGGAAGTGAGGGCTGCGCTGGAGCA GCGGGAGCAGGATGCTGTGGACCAAGTGAAGGTGATCATGGATGCTCTGGATGAGAGAGCCAAGGTGCTGCATGA GGACAAGCAGACCCGGGAGCAGCTGCATAGCATCAGCGACTCTGTGTTTTTTCTGCAGGAATTTGGTGCATTGAT AGGCAACTTCAAGGACGACCTGCTCAATGTATGCATGCGCCACGTTGAGAAGATGTGCAAGGCGGACCTGAGCCG TAACTTCATTGAGAGGAACCACATGGAGAACGGTGGTGACCATCGCTATGTGAACAACTACACGAACAGCTTCGG GGGTGAGTGGAGTGCACCGGACACCATGAAGAGATACTCCATGTACCTGACACCCAAAGGTGGGGTCCGGACATC ATACCAGCCTCGTCTCCTGGCCGCTTCACCAAGGAGACCACCCAGAAGAATTTCAACAATCTCTATGGCACCAA AGGTAACTACACCTCCCGGGTCTGGGAGTACTCCTCCAGCATTCAGAACTCTGACAATGACCTGCCCGTCGTCCA AGGCAGCTCCTCCTCTCCCTGAAAGGCTATCCCTCCTCATGCGGAGCCAAAGCCCCAAGGCCCAGGCCCAGAC TTGGAAATCTGGCAAGCAGACTATGCTGTCTCACTACCGGCCATTCTACGTCAACAAAGGCAACGGGATTGGGTC AGCCTCTTGGGGGCAGTTCCGGCCTCTCCGACTTCCCCACTGGCCACACTCCATTCAGACTCCTTTCCTGCCTTG TGACCTCAGATGGTCACCATCATTCCTGTGCTCAGAGGCCAACCCATCACAGGGGTGAGATAGGTTGGGGCCTGC CCTAACCCGCCAGCCTCCTCCTCCGGGCTGGATCTGGGGGCTAGCAGTGAGTACCCGCATGGTATCAGCCTGCC TCTCCCGCCCACGCCCTGCTGTCTCCAGGCCTATAGACGTTTCTCTCCAAGGCCCTATCCCCCAATGTTGTCAGC AGATGCCTGGACAGCACAGCCACCCATCTCCCATTCACATGGCCCACCTCCTGCTTCCCAGAGGACTGGCCCTAC GTGCTCTCTCTCGTCCTACCTATCAATGCCCAGCATGGCAGAACCTGCAGCCCTTGGCCACTGCAGATGGAAACC TCTCAGTGTCTTGACATCACCCTACCCAGGCGGTGGGTCTCCACCACAGCCACTTTGAGTCTGTGGTCCCTGGAG GGTGGCTTCTCCTGACTGGCAGGATGACCTTAGCCAAGATATTCCTCTGTTCCCTCTGCTGAGATAAAGAATTCC CTTAACATGATATAATCCACCCATGCAAATAGCTACTGGCCCAGCTACCATTTACCATTTGCCTACAGAATTTCA TTCAGTCTACACTTTGGCATTCTCTCTGGCGATGGAGTGTGGCTGACCGCAAAAGGTGCCTTACACACTG CCCCACCCTCAGCCGTTGCCCCATCAGAGGCTGCCTCCTCCTTCTGATTACCCCCCCATGTTGCATATCAGGGTG CTCAAGGATTGGAGAGAGACAAAACCAGGAGCAGCACAGTGGGGACATCTCCCGTCTCAACAGCCCCAGGCCTA ATAAACCATTGGTCTGTC

MEAADASRSNGSSPEARDARSPSGPSGSLENGTKADGKDAKTTNGHGGEAAEGKSLGSALKPGEGRSALFAGNEW RRPIIQFVESGDDKNSNYFSMDSMEGKRSPYAGLQLGAAKKPPVTFAEKGELRKSIFSESRKPTVSIMEPGETRR NSYPRADTGLFSRSKSGSEEVLCDSCIGNKQKAVKSCLVCQASFCELHLKPHLEGAAFRDHQLLEPIRDFEARKC PVHGKTMELFCQTDQTCICYLCMFQEHKNHSTVTVEEAKAEKETELSLQKEQLQLKIIEIEDEAEKWQKEKDRIK SFTTNEKAILEQNFRDLVRDLEKQKEEVRAALEQREQDAVDQVKVIMDALDERAKVLHEDKQTREQLHSISDSVL FLQEFGALMSNYSLPPPLPTYHVLLEGEGLGQSLGNFKDDLLNVCMRHVEKMCKADLSRNFIERNHMENGGDHRY VNNYTNSFGGEWSAPDTMKRYSMYLTPKGGVRTSYQPSSPGRFTKETTQKNFNNLYGTKGNYTSRVWEYSSSIQN SDNDLPVVQGSSSFSLKGYPSLMRSQSPKAQPQTWKSGKQTMLSHYRPFYVNKGNGIGSNEAP

CAACGGGTCGAGCCCAGAAGCCAGGGATGCCCGGAGCCCGTCGGGCCCCAGTGGCAGCCTGGAGAATGGCACCAA CCTGAAGCCAGGGGAAGGTAGGAGCGCCCTGTTCGCGGGCAATGAGTGGCGGCGACCCATCATCCAGTTTGTCGA GTCCGGGGACGACAAGAACTCCAACTACTTCAGCATGGACTCTATGGAAGGCAAGAGGTCGCCGTACGCAGGGCT CCAGCTGGGGGCTGCCAAGAAGCCACCCGTTACCTTTGCCGAAAAGGGCGAGCTGCGCAAGTCCATTTTCTCGGA GTCCCGGAAGCCCACGGTGTCCATCATGGAGCCCGGGGAGACCCGGCGGAACAGCTACCCCCGGGCCGACACGGG CCTTTTTCACGGTCCAAGTCCGGCTCCGAGGAGGTGCTGTGCGACTCCTGCATCGGCAACAAGCAGAAGGCGGT CAAGTCCTGCCTGGTGTGCCAGGCCTCCTTCTGCGAGCTGCATCTCAAGCCCCACCTGGAGGGCGCCGCCTTCCG AGACCACCAGCTGCTCGAGCCCATCCGGGACTTTGAGGCCCGCAAGTGTCCCGTGCATGGCAAGACGATGGAGCT CTTCTGCCAGACCAGACCTGCATCTGCTACCTTTGCATGTTCCAGGAGCACAAGAATCATAGCACCGTGAC AGTGGAGGAGGCCAAGGCCGAGAAGGAGCGGAGCTGTCACTGCAAAAGGAGCAGCTGCAGCTCAAGATCATTGA GATTGAGGATGAAGCTGAGAAGTGGCAGAAGGAGAAGGACCGCATCAAGAGCTTCACCACCAATGAGAAGGCCAT CCTGGAGCAGAACTTCCGGGACCTGGTGCGGGACCTGGAGAAGCAAAAGGAGGAAGTGAGGGCTGCGCTGGAGCA GCGGGAGCAGGATGCTGTGGACCAAGTGAAGGTGATCATGGATGCTCTGGATGAGAGAGCCAAGGTGCTGCATGA GGACAAGCAGACCCGGGAGCAGCTGCATAGCATCAGCGACTCTGTGTTGTTTCTGCAGGAATTTGGTGCATTGAT AGGCAACTTCAAGGACGACCTGCTCAATGTATGCATGCGCCACGTTGAGAAGATGTGCAAGGCGGACCTGAGCCG TAACTTCATTGAGAGGAACCACATGGAGAACGGTGGTGACCATCGCTATGTGAACAACTACACGAACAGCTTCGG GGGTGAGTGGAGTGCACCGGACACCATGAAGAGATACTCCATGTACCTGACACCCAAAGGTGGGGTCCGGACATC ATACCAGCCCTCGTCTCCTGGCCGCTTCACCAAGGAGACCACCCAGAAGAATTTCAACAATCTCTATGGCACCAA AGGTAACTACACCTCCCGGGTCTGGGAGTACTCCTCCAGCATTCAGAACTCTGACAATGACCTGCCCGTCGTCCA AGGCAGCTCCTCCTCCTGAAAGGCTATCCCTCCTCATGCGGAGCCAAAGCCCCAAGGCCCAGAC ${\tt TTGGAAATCTGGCAAGCAGACTATGCTGGTGGTT} \underline{{\tt TAA}}_{\tt GCAAGGTCTGAGCATCCCTCAAGTCCTGCTGGACCA}$ CACAAAGGCAAGGAGCTGACCAGGAGGTGTCAGTTCCCTGAGAGACAGGGCCAAAGGCAGTGTACCCTTGAGTCT CACTACCGGCCATTCTACGTCAACAAAGGCAACGGGATTGGGTCCAACGAAGCCCCATGAGCTCCTGGCGGAAGG GTGCTCAAGGATTGGAGAGGAGACAAAACCAGGAGCAGCACAGTGGGGACATCTCCCGTCTCAACAGCCCCAGGC CTATGGGGGCTCTGGAAGGATGGGCCAGCTTGCAGGGGTTGGGGAAGACATCCAGCTTGGGCTTTCCCCTTT GGAATAAACCATTGGTCTGTC

MEAADASRSNGSSPEARDARSPSGPSGSLENGTKADGKDAKTTNGHGGEAAEGKSLGSALKPGEGRSALFAGNEW RRPIIQFVESGDDKNSNYFSMDSMEGKRSPYAGLQLGAAKKPPVTFAEKGELRKSIFSESRKPTVSIMEPGETRR NSYPRADTGLFSRSKSGSEEVLCDSCIGNKQKAVKSCLVCQASFCELHLKPHLEGAAFRDHQLLEPIRDFEARKC PVHGKTMELFCQTDQTCICYLCMFQEHKNHSTVTVEEAKAEKETELSLQKEQLQLKIIEIEDEAEKWQKEKDRIK SFTTNEKAILEQNFRDLVRDLEKQKEEVRAALEQREQDAVDQVKVIMDALDERAKVLHEDKQTREQLHSISDSVL FLQEFGALMSNYSLPPPLPTYHVLLEGEGLGQSLGNFKDDLLNVCMRHVEKMCKADLSRNFIERNHMENGGDHRY VNNYTNSFGGEWSAPDTMKRYSMYLTPKGGVRTSYQPSSPGRFTKETTQKNFNNLYGTKGNYTSRVWEYSSSIQN SDNDLPVVQGSSSFSLKGYPSLMRSQSPKAQPQTWKSGKQTMLVV

MLPVLRDFGPAAPPPQRPGPSSHRTICAVPSASAWSSANLWVLVDCILRDTSEDLGLQCDAVNLAFGRRCEELED ARHKLQHHLHKMLREITDQEHNVVALKEAIKDKEEPLHIAQTRLYLPSHRPNMQLCREAAQFRYCLGL

ATGGGAAATTCGATGGACATAGGCCCCCTGAGGCCCCAGGACTATCTTTTCAGTTGTGAACTAAAGGCC GACGAATTGAAGTGTGGTCAGGGCCAGTGTATATTAGTGGACAGCACTTAGTATCTGTGGAGGAAGATGCAGAG TCAGAAGATGAAGAAGAAGAGAGGAGGATGTGAAACTCTTAATCGAAGCCAAGTTCATCAATTATGTGAAGAATTGCTTC CGGAAGACTGACCAGGAGGCTATTCAAGATCTCTGGCAGCGGAGGAAGCCTCTTGAAGAAAATAGTTTAAACAGT TTTTTATAA

ACAATTTCGCGCCAAACTTGACCGCGCGTTCTGCTGTAACGAGCGGGCTCGGAGGTCCTCCCGCTGCTGTCATGG TTGGTTCGCTAAACTGCATCGTCGCTGTGTCCCAGAACATGGGCATCGGCAAGAACGGGGACCTGCCCTGGCCAC CGCTCAGGAATGAATTCAGATATTTCCAGAGAATGACCACAACCTCTTCAGTAGAAGGTAAACAGAATCTGGTGA AACAACCAGAATTAGCAAATAAAGTAGACATGGTCTGGATAGTTGGTGGCAGTTCTGTTTATAAGGAAGCCATGA ATCACCCAGGCCATCTTAAACTATTTGTGACAAGGATCATGCAAGACTTTGAAAGTGACACGTTTTTTCCAGAAA TTGATTTGGAGAAATATAAACTTCTGCCAGAATACCCAGGTGTTCTCTCTGATGTCCAGGAGGAGAAAGGCATTA TGAAAAAGTATGTATTTTTACATTAGAAAAGGTTTTTTGTTGACTTTAGATCTATAATTATTTCTAAGCAACTA GTTTTTATTCCCCACTACTCTTGTCTCTATCAGATACCATTTATGAGACATTCTTGCTATAACTAAGTGCTTCTC CAAGACCCCAACTGAGTCCCCAGCACCTGCTATAGTGAGCTGCCATTCCACACCCCATCACATGTGGCACTCTTGC GAGCAGTTTCACTAGTGGAAATACCAAAAGATTCCTACGTGTATATCCAGAGGTTTGTAGATAAATGTTGCCACC TTGTTTGTAACAGTGGAAAATTGAAAACAACCTGGAAGTCCAGTGATGGGAAAATGAGTATGTTTCTGTCTTAGA TTGGGGAACCCAAAGCAGATTGCAAGACTGAAATTTCAGTGAAAGCAGTGTATTTGCTAGGTCATACCAGAAATC ATCAATTGAGGTACGGAGAAACTGAACTGAGAAGGTAAGAAAAGCAATTTAAAGTCAGCGAGCAGGTTCTCATTG TGGTTGTCAGCTCCCTGTCCTGTGTGGGGCGGAACATAGTCCAGCTGCTCTATAGCAAGTCTCAGGTGTTTGCA GTAAGAAGCTGCTGGCATGCACGGGAACAGTGAATGCCAAACACTTAAAGCAATTCGATGTTTAAGTATGTAAGT TCTTTTTTTTTAGACAGCGTTTCGCTCTTGTTGCCCAGGCTAGCATGCAATGGTGTGACCTCGGCTTACTGCAA CGTGACCGCAAGCGATTCACCCACCTCAGCCTCCCAAAGTGCTGGGATTACCGGCTTGAGCCACACCCCGGCA CATCTTCATTCTTTTTATGTAGTAAAAAGTATAAGGCCACACATGGTTTATTTGAAGTATTTTACAATTTAAAAA AATACAGAAGCAGGAAAACCAATTATAAGTTCAAGTGAGGGATGATGGTTGCTTGAACCAAAGGGTTGCATGTAG TAAGAAATTGTGATTTAAGATATATTTTAAAGTTATAAGTAGCAGGATATTCTGATGGAGTTTGACTTTGGTTTT TGGCGAAGCCCCATCTCTACAAAAAACACAGAAATTAGCTGGGCATTGTGGCGCACACCTGTATTCCCATCTACT CAGGAAGCTGAGATGGAAGAATTAATTGAGCCCACGAGTTCAAGGCTGCAGTGAGTCGTGATTGTGCCACTGCAC TCCAGCCGGGGTGACAGAAGAGACCTTGTCTCGAAAAGGAATCTGAAAACAATGGAACCATGCCTTCATAATTCT AGAAAGTTATTTCAACTGATAAATCTATATTCACCCAAATAATCAAGGGTGAAGGTAAAATAATACATTTTTAG ACAAGCAAAGACTCAGGGGTTACCTCCATGTGCCCTTTTTAGGGAAGCTGTTGGAGAAAATACTCCAGCAAAATG **AAGGAGTACACAAACCAGAGAATGACATGAATCCAGCAAATAGGATCCAACACAGGCAATATTCCAGCTATGGAG** CTAGCTTTAAAAAGGAACAGTAAAAATATTAATCGGTTAGCTGGGTGGAATGGCCCATGCCTGTAGTCCCAGCTA CTCGGGAGGCTCAGCAGCAGGACGACTTGAGCCCAAGAGTTCCAGACCAGCCTGGCCACCTTAGTGAGATCCCTT CTCTTAAAAATAATAACTTATTGCCAGATTTGGGGCATTTGGAAAGAAGTTCATTGAAGATAAAGCAAAAGTAAA GAAGAGCATAATACACTGTTTTTCTCAACAAGGAGCAGTATGTACACAGTCATAATGATGTGACTGCTTAGCCCC TAAATATGGTAACTACTCTGGGACAATATGGGAGGAAAAGTGAAGATTGTGATGGTGTAAGAGCTAAATCCTCAT ATTGCTAAAAGAGTTAAAAGTCATTGCTCTGGAGAATTAGGAGGGATGGGGCAGGGGACTGTTAGGATGCATTAT TGGAAAAACCCATGAAGGTAACTAACGGAAGGAAAAACTAAGAGAATGAAAAGTATTTGCCTCTGGAAAGAACAA CTGGCAGGACTGTTGTTTCATTGTAAGACTTTTGGAGCCATTTAATTGTACTTAACCATTTTCATCTATTTCTT TAATAAGAACAATTCCATCTTAATAAAGAGTTACACTTGTTAATA

3717/6881 FIGURE 3429A

ATGTCTGGCGGCGCCGCAGAGAAGCAGCACCCCCGGTTCCCTGTTCCTCTCGCCGCCGGCTCCTGCCCCC GAGCACCGCTTCTTCCGCCGGAGCGTCATCTGTGACTCCAATGCCACTGCACTGGAGCTTCCCGGCCTTCCTCTT TCCCTGCCCCAGCCCAGCATCCCCGCGGCTGTCCCGCAGAGTGCTCCACCGGAGCCCCACCGGGAAGAGACCGTG ACCGCCACCGCCACTTCCCAGGTAGCCCAGCAGCCTCCAGCCGCTGCCGCCCCTGGGGAACAGGCCGTCGCGGGC CAGGATGATATCGAAGAGCTGGAGACCAAGGCCGTGGGAATGTCTAACGATGGCCGCTTTCTCAAGTTTGACATC GAAATCGGCAGAGGCTCCTTTAAGACGGTCTACAAAGGTCTGGACACTGAAACCACCGTGGAAGTCGCCTGGTGT GAACTGCAGGATCGAAAATTAACAAAGTCTGAGAGGCAGAGATTTAAAGAAGAAGCTGAAATGTTAAAAGGTCTT CAGCATCCCAATATTGTTAGATTTTATGATTCCTGGGAATCCACAGTAAAAGGAAAGAAGTGCATTGTTTTGGTG ACTGAACTTATGACGTCTGGAACACTTAAAACGTATCTGAAAAGGTTTAAAGTGATGAAGATCAAAGTTCTAAGA AGCTGGTGCCGTCAGATCCTTAAAGGTCTTCAGTTTCTTCATACTCGAACTCCACCTATCATTCACCGCGATCTT AAATGTGACAACATCTTTATCACCGGCCCTACTGGCTCAGTCAAGATTGGAGACCTCGGTCTGGCAACCCTGAAG CGGGCTTCTTTTGCCAAGAGTGTGATAGGTACCCCAGAGTTCATGGCCCCTGAGATGTATGAGGAGAAATATGAT GAATCCGTTGACGTTTATGCTTTTGGGATGTGCATGCTTGAGATGGCTACATCTGAATATCCTTACTCGGAGTGC GAAGTGAAGGAAATTATTGAAGGATGCATACGACAAAACAAAGATGAAAGATATTCCATCAAAGACCTTTTGAAC CATGCCTTCTTCCAAGAGGAAACAGGAGTACGGGTAGAATTAGCAGAAGAAGATGATGGAGAAAAAAATAGCCATA AAATTATGGCTACGTATTGAAGATATTAAGAAATTAAAGGGAAAATACAAAGATAATGAAGCTATTGAGTTTTCT TTTGATTTAGAGAGAGATGTCCCAGAAGATGTTGCACAAGAAATGGTAGAGTCTGGGTATGTCTGTGAAGGTGAT CGGGAGGAGCAAGAAAAAAAAAAAAGCAGGAAGAGAGCAGTCTCAAACAGCAGGTAGAACAATCCAGTGCTTCCCAG ACAGGAATCAAGCAGCTCCCTTCTGCTAGCACCGGCATACCTACTGCTTCTACCACTTCAGCTTCAGTTTCTACA CAAGTAGAACCTGAAGAACCTGAGGCAGATCAACATCAACAACTACAGTACCAGCAACCCAGTATATCTGTGTTA TCATATGGTTCCCAACATGAACAGGCACATTCTACAGGCACAGTCCCAGGGCATATACCTTCTACTGTCCAAGCA AGCTTAACAGGGGTTTCATCTTCCCAACCCATACAACATCCTCAGCAGCAGCAGGGAATACAGCAGACAGCCCCT CCTCAACAGACAGTGCAGTATTCACTTTCACAGACATCAACCTCCAGTGAGGCCACTACTGCACAGCCAGTGAGT ATCCAAGGCGAACCTCAGATCCCAGTTGCGACACAACCCTCGGTTGTTCCAGTCCACTCTGGTGCTCATTTCCTT CCAGTGGGACAGCCGCTCCCTACTCCCTTGCTCCCTCAGTACCCTGTCTCTCAGATTCCCATATCAACTCCTCAT GTGTCTACGGCTCAGACAGGTTTCTCATCCCTTCCCATCACAATGGCAGCTGGCATTACTCAGCCTCTGCTCACG TTGGCTTCATCTGCTACAACAGCTGCGATCCCGGGGGTATCAACTGTGGTTCCTAGTCAGCTTCCAACCCTTCTG CAGCCTGTGACTCAGCTGCCAAGTCAGGTTCACCCACAGCTCCTACAACCAGCAGTTCAGTCCATGGGAATACCA GCTAACCTTGGACAAGCTGCTGAGGTTCCACTTTCCTCTGGAGATGTTCTGTACCAGGGCTTCCCACCTCGACTG CCACCACAGTACCCAGGAGATTCAAATATTGCTCCCTCTTCCAACGTGGCTTCTGTTTGCATCCATTCTACAGTC CTATCCCCTCCCATGCCGACAGAAGTACTGGCTACACCTGGGTACTTTCCCACAGTGGTGCAGCCTTATGTGGAA GCCCCCACTACATCCTCCCAGCAAGCAGTTTTGGAGAGTACTCAGGGAGTCTCTCAGGTTGCTCCTGCAGAGCCA GTTGCAGTAGCACAGACCCAAGCTACCCAGCCGACCACTTTGGCTTCCTCTGTAGACAGTGCACATTCAGATGTT CATTACCGAAAATCTGTAAGGAGTCGCTCTCGACATGAAAAAACTTCACGCCCAAAATTAAGAATTTTGAATGTT TCAAATAAAGGAGACCGAGTAGTAGAATGTCAATTAGAGACTCATAATAGGAAAATGGTTACATTCAAATTTGAC TCGTTTGTGGATCAAGTGCGAGAAATTATTGAAAAAGCTGATGAAAATGCTCAGTGAGGATGTCAGTGGGAACCA

3718/6881 FIGURE 3429B

GAGGGTGATCAGGGATTGGAGAGTCTACAAGGAAAGGATGACTATGGCTTTTCAGGTTCTCAGAAATTGGAAGGA GAGTTCAAACAACCAATTCCTGCGTCTTCCATGCCACAGCAAATAGGCATTCCTACCAGTTCTTTAACTCAAGTT GTTCATTCTGCGGGAAGGCGGTTTATAGTGAGTCCTGTGCCAGAAAGCCGATTACGAGAATCAAAAGTTTTCCCC AGTGAAATAACAGATACAGTTGCTGCCTCTACAGCTCAGAGCCCTGGAATGAACTTGTCTCACTCTGCATCATCC CTTAGTCTACAACAGGCCTTTTCTGAACTTAGACGTGCCCAAATGACAGAAGGACCCAACACAGCACCTCCAAAC TTTAGTCATACAGGACCAACATTTCCAGTAGTACCTCCTTTCTTAAGTAGCATTGCTGGAGTCCCAACCACAGCA GCAGCCACAGCACCAGTCCCTGCAACAAGCAGCCCTCCTAATGACATTTCCACATCAGTAATTCAGTCTGAGGTT ACAGTGCCCACTGAAGAGGGGATTGCTGGAGTTGCCACCAGCACAGGTGTGGTAACTTCAGGTGGTCTCCCCATA CCACCTGTGTCTGAATCACCAGTACTTTCCAGCGTAGTTTCAAGTATCACAATACCTGCAGTTGTCTCAATATCT ACTACATCCCCGTCACTTCAAGTCCCCACATCCACATCTGAGATCGTTGTTTCTAGTACAGCACTGTATCCTTCA GTAACAGTTTCAGCAACTTCAGCCTCTGCAGGGGGCAGTACTGCTACCCCAGGTCCTAAGCCTCCAGCTGTAGTA TCTCAGCAGGCAGCAGCACCTACTGTGGGAGCCACATTAACATCAGTTTCTACCACCACTTCATTCCCAAGC ACAGCTTCACAGCTGTGCATTCAGCTTAGCAGCAGTACTTCTACTCCTACTTTAGCTGAAACCGTGGTAGTTAGC GCACACTCACTAGATAAGACATCTCATAGCAGTACAACTGGATTGGCTTTCTCCCTCTGCACCATCTTCCTCT TCCTCTCGGAGCAGGAGTGTCTAGTTATATTTCTCAGCCTGGTGGGCTGCATCCTTTGGTCATTCCATCAGTG ATAGCTTCTACTCCTATTCTTCCCCAAGCAGCAGGACCTACTTCTACACCTTTATTACCCCCAAGTACCTAGTATC CCACCCTTGGTACAGCCTGTTGCCAATGTGCCTGCTGTACAGCAGACACTAATTCATAGTCAGCCTCAACCAGCT TTGCTTCCCAACCAGCCCCATACTCATTGTCCTGAAGTAGATTCTGATACACAACCCAAAGCTCCTGGAATTGAT GACATAAAGACTCTAGAAGAAAAGCTGCGGTCTCTGTTCAGTGAACACAGCTCATCTGGAGCTCAGCATGCCTCT GTCTCACTGGAGACCTCACTAGTCATAGAGAGCACTGTCACACCAGGCATCCCAACTACTGCTGTTGCACCAAGC ACACCAGTGGTCACACCTGGGCAAGTTTCTACCCCAGTCAGCACTACTACATCAGGAGTGAAACCTGGAACTGCT CCCTCCAAGCCACCTCTAACTAAGGCTCCGGTGCTGCCAGTGGGTACTGAACTTCCAGCAGGTACTCTACCCAGC GAGCAGCTGCCACCTTTTCCAGGACCTTCTCTAACCCAGTCCCAGCAACCTCTAGAGGATCTTGATGCTCAATTG AGAAGAACACTTAGTCCAGAGATGATCACAGTGACTTCTGCGGTTGGTCCTGTGTCCATGGCGGCTCCAACAGCA ATCACAGAAGCAGGAACACAGCCTCAGAAGGGTGTTTCTCAAGTCAAAGAAGGCCCTGTCCTAGCAACTAGTTCA GGAGCTGGTGTTTTTAAGATGGGACGATTTCAGGTTTCTGTTGCAGCAGACGGTGCCCAGAAAGAGGGGTAAAAAT AAGTCAGAAGATGCAAAGTCTGTTCATTTTGAATCCAGCACCTCAGAGTCCTCAGTGCTATCAAGTAGTAGTCCA GAGAGTACCTTGGTGAAACCAGAGCCGAATGGCATAACCATCCCTGGTATCTCTTCAGATGTGCCAGAGAGTGCC CACAAAACTACTGCCTCAGAGGCAAAGTCAGACACTGGGCAGCCTACCAAGGTTGGACGTTTTCAGGTGACAACT CTGTCAGAGCCTTCACATCTAAATGGGCCGTCTTCTGACCCGGAGGCCGCTTTTTTAAGTAGGGATGTGGATGAT GGTTCCGGTAGTCCACACTCGCCCCATCAGCTGAGCTCAAAGAGCCTTCCTAGCCAGAATCTAAGTCAAAGCCTT AGTAATTCATTTAACTCCTCTTACATGAGTAGCGACAATGAGTCAGATATCGAAGATGAAGACTTAAAGTTAGAG CTGCGACGACTACGAGATAAACATCTCAAAGAGATTCAGGACCTGCAGAGTCGCCAGAAGCATGAAATTGAATCT TTGTATACCAAACTGGGCAAGGTGCCCCCTGCTGTTATTATTCCCCCAGCTGCTCCCCTTTCAGGGAGAAGACGA CGACCCACTAAAAGCAAAGGCAGCAAATCTAGTCGAAGCAGTTCCTTGGGGAATAAAAGCCCCCAGCTTTCAGGT AACCTGTCTGGTCAGAGTGCAGCTTCAGTCTTGCACCCCCAGCAGACCCTCCACCCTCCTGGCAACATCCCAGAG GATGGTGCCATTTCAGTACCAAGCCTTTCTGCTCCAGGTCAAGGAACCAGCAGCACAAACACTGTTGGGGCAACA GTGAACAGCCAAGCCCCAAGCTCAGCCTCCTGCCATGACGTCCAGCAGGAAGGGCACATTCACAGATGACTTG TACGAGGGCCCTGGAATGGCAAGGAAGTTCTCTGCACCTGGGCAACTGTGCATCTCCATGACCTCGAACCTGGGT GGCTCTGCCCCCATCTCTGCAGCATCAGCTACCTCTCTAGGTCACTTCACCAAGTCTATGTGCCCCCCACAGCAG TATGGCTTTCCAGCTACCCCATTTGGCGCTCAATGGAGTGGGACGGGTGGCCCAGCACCACACCACTTGGCCAG TTCCAACCTGTGGGAACTGCCTCCTTGCAGAATTTCAACATCAGCAATTTGCAGAAATCCATCAGCAACCCCCCA GGCTCCAACCTGCGGACCACTTAG

3719/6881 FIGURE 3430A

CGGCGGCGGCGGTAGTGGCGGCGCGGCGGTGCCCGGGCGCAGCGGCAGCAGTAGCGGCAGCCCTGAGGACGGT GAGACGGCCGCGGCGGCGACAGCGCGGAAGTCGCGCGGGACCCAGAGCTTCCCCCCTGTCGCTAGTGCTGAG GCTTTCGCCTTTCCTACCCAGCTTCTTGCTCACGGCCCGGGCTGGGCTGGGCAGGGCAACGCGCCCCCGGGCAGG GGCGGAGCTGTAGATATGGTGTAAGATACTTCTTCAAGATTGGACAGCTGGGGACCTTCTTCTGATTAACCTTAA ACCAACTTGTAGCCATAGAGACACCTCACAAGGTTCCCATTTTTGTTGTTGTTGTTGTTGATTTTCTGCTCACAC $\tt CTTTCCTGACCTTGCAACC \underline{ATG} \texttt{TATGGAAGTGCCCGCTCTGTTGGGAAGGTGGAGCCGAGCCAGAGCCCTGG}$ CAGTGTTGGAGGTGGCAGTGGGAAAACCCTTTCAATGGAAAATATACAATCTTTAAATGCTGCCTATGCCACCTC TGGCCCTATGTATCTAAGTGACCATGAAAATGTGGGTTCAGAAACACCTAAAAGCACCATGACACTTGGCCGTTC TAGTGACACCATAGCATTTGGAGAGCATCACCTCCCTCCTGTGAGTATGGCATCCACTGTACCTCACTCCCTTCG GAAGGATGTGGAAGTAAAGGAGAGCAAATTGAGTTCTTCAATGAATAGCATCAAGACCTTCTGGAGCCCAGAGCT GGAGGAAAACCAGCACATGCAGATGACAATCCAGGCTCTCCAGGATGAATTGCGGATCCAGAGGGACCTGAATCA GCTGTTTCAGCAGGATAGTAGCAGCAGGACTGGCGAACCTTGTGTAGCAGAGCTGACAGAGGAGAACTTTCAGAG GCTTCATGCTGAGCATGAGCGGCAGGCCAAAGAGCTGTTTCTTCTTCGAAAGACATTGGAGGAAATGGAGCTGCG TATTGAGACTCAAAAGCAGACCCTAAATGCTCGGGATGAATCCATTAAGAAGCTTCTGGAAATGTTGCAGAGCAA AGGACTTTCTGCCAAGGCTACCGAGGAAGACCATGAGAGAACAAGACGACTGGCAGAGGCAGAGATGCACGTTCA GAATGCTCCTGATTCTGCCAAAACAAAAGCTCTGCAAACTGTTATTGAGATGAAGGATTCAAAAAATTTCCTCTAT GGAGCGTGGGCTTCGAGACCTGGAAGAGGAAATTCAGATGCTGAAATCGAATGGTGCTTTGAGTACTGAGGAAAG GGAAGAAGAAATGAAGCAAATGGAAGTGTATCGGAGCCATTCTAAATTTATGAAAAATAAGATTGGCCAGGTGAA ACAGGAGCTGTCCAGAAAGGACACAGAACTACTCGCCCTGCAGACAAAGCTAGAAACACTCACAAACCAGTTCTC AGATAGTAAACAGCACATTGAAGTGTTGAAGGAGTCCTTGACTGCTAAGGAGCAGAGGGCTGCCATCCTGCAGAC TGAGGTGGATGCTCTCCGATTGCGTTTGGAAGAAGGAAACCATGTTGAATAAAAAGACAAAACAAATTCAGGA TATGGCTGAAGAGAAGGGGACACAAGCTGGAGAGATACATGACCTCAAGGACATGTTGGATGTGAAGGAGCGGAA GGTTAATGTTCTTCAGAAGAAGATTGAAAATCTTCAAGAGCAGCTTAGAGACAAGGAAAAGCAGATGAGCAGCTT GAAAGAACGGGTCAAATCCTTGCAGGCTGACACCACCAACACTGACACTGCCTTGACAACTTTGGAGGAGGCCCT TGCAGAGAAAGAGCGGACAATTGAACGCTTAAAGGAGCAGAGGGACAGAGATGAGCGAGAGAAGCAAGAAGAAAT TGATAACTACAAAAAAGATCTTAAAGACTTGAAGGAAAAAGTCAGCCTGTTGCAAGGCCGACCTTTCAGAGAAAAGA GGCTTCACTTTTGGATCTGAAAGAGCATGCTTCTTCTCTGGCATCCTCAGGACTGAAAAAGGACTCACGGCTTAA GACACTAGAGATTGCTTTGGAGCAGAAGAAGGAGGAGTGTCTGAAAATGGAATCACAATTGAAAAAGGCACATGA CAAAGATGAATCTAGCAAGGCCCAGGCAGAAGTTGATCGACTCTTAGAAATCTTGAAGGAGGTGGAAAATGAGAA GAATGACAAAGATAAGAAGATAGCTGAGTTGGAAAGTCTCACCTCAAGGCAAGTGAAAGACCAGAATAAGAAGGT AGCAAATCTGAAGCACAAGGAACAGGTGGAAAAAAAGAAGAGTGCACAAATGTTAGAGGAGGCGCGACGACGGGA GGACAATCTCAACGACAGCTCTCAGCAGCTACAGGTGGAGGAGTTACTGATGGCCATGGAGAAGGTAAAGCAGGA ACTAGAATCCATGAAAGCAAAGCTGTCCTCCACCCAGCAGTCTCTGGCAGAAAAGGAAACTCACTTGACTAATCT TCGGGCAGAGAAGAACACTTAGAGGAAGTTCTGGAGATGAAGCAAGAAGCTCTTCTGGCTGCCATTAGTGA AAAAGACGCCAATATAGCTCTCTTGGAGCTTTCGTCCTCTAAGAAGAAGACCCAAGAGGAAGTGGCTGCCCTGAA GCGGGAGAAGGATCGTCTGGTACAGCAGCTTAAGCAGCAGACGCAAAATCGAATGAAGCTAATGGCCGACAACTA CTTGACCAAAATAGAAGTAAATTAAAGTTGTACATTGGACACCTGACAACCCTCTGCCATGACCGAGACCCCCTG ATCCTCCGTGGACTCACTCCACCAGCTTCCTATAACTTGGACGATGACCAGGCGGCTTGGGAGAATGAGCTGCAG AAGATGACCCGGGGGCAGCTTCAGGATGAGTTAGAGAAAGGTGAACGGGACAATGCAGAACTGCAGGAGTTTGCC AACGCCATTCTTCAGCAGATAGCAGACCATTGTCCCGACATCCTAGAGCAAGTGGTCAACGCCCTGGAAGAGTCC

3720/6881 FIGURE 3430B

TCTTGACCCTGCTTTATGGGGAAGCCTGAGGTAGTCAACCCAGGAGCCAAGAAAAGAGAACTACGAGGAACAGGT GCCCGGAACCTTCTTGGCACCAAACACTACAAACTTCATCCCAACTTGCTCACTTGAAGAAGTGTGATTCCAGCA CCGTTTCTACATCTGCCATCTTACTCTGCCTTTCTGCTTTGGATGTGGTCTCTACACTAACCTTCTTGATGTCCA GGGTAGATAAAGGGTCGAATCTCTCTGAAGAACTGCCACCTGGTCATCAGCAGTGGAGAACTGTGGGAGCTGGTG GCTCTGCCCTGACAGAGAGCCATGGAGCAGAGGAGCCTCTCACCTCCTGTCCTCTGACATGAGAATGAAACCAGG AATGGACTTGGAGTTCAACAGGCTGAGAGGATGCCTCCAATGGACCAGAGAGCTGAGTGTTCTAATATCACAATA GGTGCTTTCTCCTAAAAGGGCAAAAAACAATCTCAAAAAGATTAGAAAAAGAGAAGGGGGGAAGGGAAGAAAAA TCGACTCTTCTTTTTACTGTCTCTTCTGCTTACTTTCCACATGAGATGCTTTGTACCGGGGAGCTGTGAGCAGGC GTTGACGTTATCATACTGAGGTGTTAGATCAAATATCTCTAATTGAAGAACATGTGAGGTTGAAAGAGCACCAGC CAGGGCAACATAGCGTGACCCTGTCTCTACAAAAAATTAAAAAGAGAACATACAAAGTTGACATATGAGACCCTG TTGTCCCCGCCTGCAGCTTTGCCCCAGTAACAGATGCCCGTTGCTCTTGGGCTGGTTTCCCCTGAACACCCTCCAA GAGGCTGCCTGCCAGCACCCGTGTCCTGAGCTCCTGCAGCCCAGTGGCTGCTGAAGTTGTGATCCCTCAC TCACCCTGCTAGCTTTGCCCTTGACTCGTCTTCTCTGAACCTCAGCCTCGTGCATTGCCTGGAACCTTCTTCTAG ACTGTGTGCAAGTCATCCATCCTTGAAAAGGCCACTTCTCAGTGAGGGAGAGATGTAGTGGATTCTGTGAGACAT ACCTGCTGGAGTTGAAGCAGTAAATAGCATGTCCTTCCCCTCCCCGATCTTAAGGTGTGTTTTCTAGA

MYGSARSVGKVEPSSQSPGRSPRLPRSPRLGHRRTNSTGGSSGSSVGGGSGKTLSMENIQSLNAAYATSGPMYLS
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TQAGEIHDLKDMLDVKERKVNVLQKKIENLQEQLRDKEKQMSSLKERVKSLQADTTNTDTALTTLEEALAEKERT
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KLSSTQQSLAEKETHLTNLRAERRKHLEEVLEMKQEALLAAISEKDANIALLELSSSKKKTQEEVAALKREKDRL
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TATTCTTCCAAATGGAAACTGCTAATTTTTGAAGCAGAAGGTTGACAGCTTCAGTAAGATCTCAAGAGAGCGAGA AGACTGGAATCAGGGAACCCTACTCTGGAAACTGTCAGTCCCAGGGCACTGGGGAGGGCTGAGGCCGACC<u>ATG</u>CC CAGCCTGCTGCTGCTCACGGCTGCTCTGCTGTCCAGCTGGGCTCAGCTTCTGACAGACGCCAACTCCTGGTG GTCATTAGCTTTGAACCCGGTGCAGAGACCCGAGATGTTTATCATCGGTGCCCAGCCCGTGTGCAGTCAGCTTCC GACTGGCATCAAGGAATGCCAGCACCAGTTCCGGCAGCGGCGGTGGAATTGCAGCACAGCGGACAACGCATCTGT CTTTGGGAGAGTCATGCAGATAGGCAGCCGAGAGACCGCCTTCACCCACGCGGTGAGCGCCGCGGGCGTGGTCAA CGCCATCAGCCGGGCCTGCCGCGAGGGCGAGCTCTCCACCTGCGGCTGCAGCCGGACGGCGCGCCCAAGGACCT GCCCCGGGACTGGCTGTGGGGCTGTGGGGACAACGTGGAGTACGGCTACCGCTTCGCCAAGGAGTTTGTGGA TGCCCGGGAGCGAGAGAACTTTGCCAAAGGATCAGAGGAGCAGGGCCGGGTGCTCATGAACCTGCAAAACAA CGAGGCCGGTCGCAGGGCTGTGTATAAGATGGCAGACGTAGCCTGCAAATGCCACGGCGTCTCGGGGTCCTGCAG GGCCGCCATGCGCGTCACCCGCAAGGGCCGGCTGGAGCTGGTCAACAGCCGCTTCACCCAGCCCACCCCGGAGGA CCTGGTCTATGTGGACCCCAGCCCCGACTACTGCCTGCGCAACGAGAGCACGGGCTCCCTGGGCACGCAGGGCCG CCTCTGCAACAAGACCTCGGAGGGCATGGATGGCTGTGAGCTCATGTGCTGCGGGCGTGGCTACAACCAGTTCAA GAGCGTGCAGGTGGAGCGCTGCCACTGCAAGTTCCACTGGTGCTCGTCAGGTGTAAGAAGTGCACGGAGAT $\tt CGTGGACCAGTACATCTGTAAA \underline{TAG} \tt CCCGGAGGGCCTGCTCCCGGCCCCCTGCACTCTGCCTCACAAAGGTCTA$ AAATGGAAAGGAAGAGCTTATTTAAGAGACGCTGGAGATCTCTGAGGAGTGGACTTTGCTGGTTCTCTCTTTG GTGGGTGGGAGACAGGGCTTTTTCTCTCCCTCTGGCGAGGACTCTCAGGATGTAGGGACTTGGAAATATTTACTG TTGTTGGTTAGAGGACTGCCTGTGATCCTGGCCACTAGGCCAAGAGGCCCTATGAAGGTGGCGGGAACTCAGCTT CAACCTCGATGTCTTCAGGGTCTTGTCCAGAATGTAGATGGGTTCCGTAAGAGGCCTGGTGCTCTCTTACTCTTT CATCCACGTGCACTTGTGCGGCATCTGCAGTTTACAGGAACGGCTCCTTCCCTAAAATGAGAAGTCCAAGGTCAT GAATGTTTGCGCCTGGGCTGCAGAAGCCAGGGTGCATGACCAGGCTGCGTGGACGTTATACTGTCTTCCCCCACC ACGGGTCAGGCTGGCGGGCCCGGCGTGCTCATCATCTCTGCCCCAGGTGTACGGTTTCTCTCTGACATTAAATGC CCTTCATGG

MPSLLLLFTAALLSSWAQLLTDANSWWSLALNPVQRPEMFIIGAQPVCSQLPGLSPGQRKLCQLYQEHMAYIGEG AKTGIKECQHQFRQRRWNCSTADNASVFGRVMQIGSRETAFTHAVSAAGVVNAISRACREGELSTCGCSRTARPK DLPRDWLWGGCGDNVEYGYRFAKEFVDAREREKNFAKGSEEQGRVLMNLQNNEAGRRAVYKMADVACKCHGVSGS CSLKTCWLQLAEFRKVGDRLKEKYDSAAAMRVTRKGRLELVNSRFTQPTPEDLVYVDPSPDYCLRNESTGSLGTQ GRLCNKTSEGMDGCELMCCGRGYNQFKSVQVERCHCKFHWCCFVRCKKCTEIVDQYICK

PCT/US2003/028547

3724/6881 FIGURE 3434

GACCATTAGCAGGCACCCAGGCCTGTCTTTGGCTCGGAAACGGTGGCCCCCAATGTAGCCTAGTTTGAACCTAGG AACTGCAGGACCAGAGAGATTCCACTGGAGCCTGATGGACGGGTGACAGAGGGAACCCTACTCTGGAAACTGTCA AGCTGGGCTCAGCTTCTGACAGACGCCAACTCCTGGTGGTCATTAGCTTTGAACCCGGTGCAGAGACCCGAGATG TTTATCATCGGTGCCCAGCCCGTGTGCAGTCAGCTTCCCGGGCTCTCCCCTGGCCAGAGGAAGCTGTGCCAATTG TACCAGGAGCACATGGCCTACATAGGGGAGGGAGCCAAGACTGGCATCAAGGAATGCCAGCACCAGTTCCGGCAG CGGCGGTGGAATTGCAGCACAGCGGACAACGCATCTGTCTTTGGGAGAGTCATGCAGATAGGCAGCCGAGAGACC GCCTTCACCCACGCGGTGAGCGCCGCGGGCGTGGTCAACGCCATCAGCCGGGCCTGCCGCGAGGGCGAGCTCTCC ACCTGCGGCTGCAGCCGGACGGCGCGCCCAAGGACCTGCCCCGGGACTGGCTGTGGGGGCGGCTGTGGGGACAAC GTGGAGTACGGCTACCGCTTCGCCAAGGAGTTTGTGGATGCCCGGGAGCGAGAGAACATTTGCCAAAGGATCA GAGGAGCAGGGCCGGGTGCTCATGAACCTGCAAAACAACGAGGCCGGTCGCAGGGCTGTGTATAAGATGGCAGAC AAGGTCGGGGACCGGCTGAAGGAGAAGTACGACAGCGCGGCCGCCATGCGCGTCACCCGCAAGGGCCGGCTGGAG CTGGTCAACAGCCGCTTCACCCAGCCCACCCCGGAGGACCTGGTCTATGTGGACCCCAGCCCCGACTACTGCCTG GAGCTCATGTGCTGCGGGCGTGGCTACAACCAGTTCAAGAGCGTGCAGGTGGAGCGCTGCCACTGCAAGTTCCAC GCTCCCGGCCCCCTGCACTCTGCCTCACAAAGGTCTATATTATATAAATCTATATAAATCTATTTTATATTTTGT ATAAGTAAATGGGTGGGTGCTATACAATGGAAAGATGAAAATGGAAAGGAAGAGCTTATTTAAGAGACGCTGGAG GGATGGAGGAGTGATCTTGTCTGGAAGTCTAGAGTCTTTGTTGGTTAGAGGACTGCCTGTGATCCTGGCCACTA GGCCAAGAGGCCCTATGAAGGTGGCGGGAACTCAGCTTCAACCTCGATGTCTTCAGGGTCTTGTCCAGAATGTAG ATGGGTTCCGTAAGAGGCCTGGTGCTCTTTACTCTTTCATCCACGTGCACTTGTGCGGCATCTGCAGTTTACAG GAACGGCTCCTTCCCTAAAATGAGAAGTCCAAGGTCATCTCTGGCCCAGTGACCACAGAGAGATCTGCACCTCCC GGACTTCAGGCCTGCCTTTCCAGCGAGAATTCTTCATCCTCCACGGTTCACTAGCTCCTACCTGAAGAGGAAAAGG GGGCCATTTGACCTGACATGTCAGGAAAGCCCTAAACTGAATGTTTGCGCCTGGGCTGCAGAAGCCAGGGTGCAT GACCAGGCTGCGTGGACGTTATACTGTCTTCCCCCACCCCGGGGAGGGGAAGCTTGAGCTGCTGTCACTCC TCCACCGAGGGAGGCCTCACAAACCACAGGACGCTGCAACGGGTCAGGCTGGCGGGCCCGGCGTGCTCATCATCT

MPSLLLLFTAALLSSWAQLLTDANSWWSLALNPVQRPEMFIIGAQPVCSQLPGLSPGQRKLCQLYQEHMAYIGEG AKTGIKECQHQFRQRRWNCSTADNASVFGRVMQIGSRETAFTHAVSAAGVVNAISRACREGELSTCGCSRTARPK DLPRDWLWGGCGDNVEYGYRFAKEFVDAREREKNFAKGSEEQGRVLMNLQNNEAGRRAVYKMADVACKCHGVSGS CSLKTCWLQLAEFRKVGDRLKEKYDSAAAMRVTRKGRLELVNSRFTQPTPEDLVYVDPSPDYCLRNESTGSLGTQ GRLCNKTSEGMDGCELMCCGRGYNQFKSVQVERCHCKFHWCCFVRCKKCTEIVDQYICK

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GTATGGGAAGGTCGGTGGCGAGTGATCCCTCATGATGTACTACCAGACTGGCTCAAGGATAATGACTTCCTCTTG CATGGACACCGGCCTCCTATGCCTTCTTTCCGGGCCTGTTTTAAGAGCATTTTCAGAATACACACAGAAACAGGC AACATTTGGACACATCTCTTAGGTTGTGTATTCTTCCTGTGCCTGGGGATCTTTTATATGTTTCGCCCAAATATC TCATGGCTCTTCCACACAGTCTACTGCCACTCAGAGGGGGTCTCTCGGCTCTTCTCTAAACTGGATTACTCTGGT ${\tt ATCTACTTGATTGTCATCTGTGTGCTGGGCATTGCAGCCATTATAGTCTCCCAGTGGGACATGTTTGCCACCCCT}$ CAGTATCGGGGAGTAAGAGCAGGAGTGTTTTTGGGCCTAGGCCTGAGTGGAATCATTCCTACCTTGCACTATGTC ATCTCGGAGGGGTTCCTTAAGGCCGCCACCATAGGGCAGATAGGCTGGTTGATGCTGATGGCCAGCCTCTACATC ACAGGAGCTGCCCTGTATGCTGCCCGGATCCCCGAACGCTTTTTCCCTGGCAAATGTGACATCTGGTTTCACTCT ${\tt CATCAGCTGTTTCATATCTTTGTGGTTGCTGGAGCTTTTGTTCACTTCCATGGTGTCTCAAACCTCCAGGAGTTT}$ AAACCAGGGCCTGCGGCACTTGCGGGCCTCCCTGCTGGCTACTGATGCCAGTACCAGAGGAGCCCCAAAACTTTG CATACCTCAAAGGATGGAGTCAATTGGGAGAAAAGGAGACATAGCCCAAACCCTGGCTTATTCTTGGGATC ACATTTATATCCGATAAGGGGTGGGAGTGTGATTTTAAATGCTCTTTTGGGAGAACAAAGAAATTAATGTAAATA GTATAGAATGAAACATGCAAGTACCACACTGTTTGAATTTTGCACAAAAAGTGACTGTAGGATCAGGTGATAG AGAGTATAGCCCTAGCCCAGTGGTGACATGACCACTCCCTTTGGGAGGCCTGAGGTAGAGGGGAGTGGTATGTGT TTTCTCAGTGGAAGCAGCACATGAGTGGGTGACAGGATGTTAGATAAAGGCTCTAGTTAGGGTGTCATTGTCATT TGAGAGACTGACACTCCTAGCAGCTGGTAAAGGGGTGCTGGAGGCCCATGGAGGAGCTCTAGAAACATTAGCAT GGGCTGATCTGATTACTTCCTGGCATCCCGCTCACTTTTATGGGAAGTCTTATTAGAGGGATGGGACAGTTTTCC ATATCCTTGCTGTGGAGCTCTGGAACACTCTCTAAATTTCCCTCTATTAAAAATCACTGCCCTAACTACACTTCC ATTTTAAATACAATGGTATGTTATTGCCAGGGAGTGAGGTACAAGACGATGGCTCATGTCACAGGCCTACCTGAT ACGGTGTCAGAGAAAGTGGTGGGGAAAGGATCTGGTTCATGGAATTCTGATCTTGGCCCATAGGTGAACCACCAA ${\tt AATAGTGCTCGAGTCTTAGGTTACTGTCATCAAAGACTTGGGATGACTCCATTATATCCTGGGGTTGTGGGTATT}$ AGAACTAAATATGGAGGTCCTGAGCATGGGGACTGGCGTCCTCAGTAGGTGTTTGGGAATATGGGAAGGGTCTCC TATTTATTCAATAGAGTTTTCCTCAGTTATTTTCCTCCCTTGCCCTTGCAATCTCCAGCAAAAGGTGGGATCTAGG AAGAAAGAATCCAGTGTAGAAGTTGAGAAGAACTTGAACGTTTTGGTTCTGGATAAGGTCACTGTCCTAGGTGCT AGGTGGACCGAGCAAAAGACTCAGTGGATGAACTGGTGCAGTGCCTGACAGAATAAAGAACAGTATTAATCCCTT TGAGAAAGCATAGTCCAGCAGGACAGTGGCCATTTGGACAGAAGCCCACTTAGTTTCTTGGGAGCAACAGCACGT ATCAGAAGCCAGACTTGCTCTTCGGTCATGCACTTTGGGATACAGCGTATAGGTGCAGCCCTGTCACAACACCAA CAGAAGTAGCAGCCTCTGGGTGCAGTCACCCACACCCCAAAGCTGGAAGGATCTGGTTCAACATAGCACAAACCC TTAGGAAAAATGAAATTAACATCACTGATGTGTAATCCAGTAAAATCTCCCTTTTTCGGGTGTGTATGTGGGCAT GTGCCCATTTCTATGTGTGTGTCTACGTGCAGCTCACTACCAACAGCCTCATGTGCACTTGACCTGACAGTGCTC TTTTAATTTTCTTTTTTGGCCCTAGGCTGGTTGGGACCTCTACAGCTTCATTCTTTCACCATTAAATAGTGGCCT TTTTCAGTATTTTCCCTCTTCCCCTTTATAAATTATGCTAAAGCCACAAAGCACATTTTTGGGGATCATAGAAGG TTGGGGTTCCAGAAAGGCATCTGTGATGGTTCCATTGATGTGGGATTTCCCTACTTGCTGTATTCTCAGTTTC TAATAAAAAGAACCAAATG

GGAAGATGGCAGCCGTGGCGGCAGGCGGCCTGGTGGGAAAGGGGCGCGACATCAGCCTAGCGGCCCTGCAGCGCC AGTGGGAGAAAACTGATGTGGAAGGAACCTTATTTGTTTATACAAGGTCTGCTTCTCCAAAGCATGGATTCACCA TTATGAATAGGCTGAGCATGGAAAATAGGACAGAACCTATTACTAAAGACTTGGATTTCCAACTCCAGGACCCTT TCCTTCTCTACAGAAATGCCAGATTGTCCATCTATGGAATTTGGTTTTATGATAAGGAAGAATGCCAAAGAATTG CAGAGCTTATGAAAAACCTAACTCAGTATGAACAGTTGAAAGCCCATCAGGGAACTGGAGCAGGAATTTCCCCAG TGATCCTCAATTCAGGAGAGGGCAAAGAAGTAGACATTTTACGAATGCTCATCAAGGCCAAAGACGAATACACAA AGTGTAAAACCTGTTCTGAGCCAAAAAAGATAACCAGTTCCTCTGCCATCTATGACAATCCAAATCTCATCAAAC CAATTCCAGTGAAACCCAGTGAAAACCAGCAACAGCGTATACCTCAGCCCAACCAGACCTTAGACCCTGAACCCC AACACTTATCCTTGACAGCTCTGTTTGGGAAGCAGGACAAAGCTACATGTCAGGAAACTGTGGAGCCTCCGCAGA CTCTCCACCAGCAGCAGCAGCAGCAGCAGCAGCAAGAGAAGCTTCCAATTAGGCAGGGGGTTGTACGCTCCC TGTCCTATGAGGAACCCAGAAGACACTCACCCCCCATTGAGAAGCAGCTCTGTCCAGCCATTCAGAAACTCATGG TCAGGAGCGCAGACCTCCACCCATTGTCAGAGCTGCCTGAAAACCGGCCTTGTGAAAATGGCAGTACCCATTCTG CGGGAGAATTTTTTACAGGACCTGTCCAGCCAGGGTCTCCTCACAACATTGGAACTTCTCGTGGTGTACAAAATG CTTCCAGAACTCAGAACCTGTTCGAGAAACTTCAGAGTACCCCAGGGGCAGCAAACAAGTGTGACCCTAGTACAC CAGCACCTGCCAGCTCAGCTGCCCTGAACCGCAGCAGCAGCTCCCACTTCTGTCACCCCTGTGGCTCCAGGAAAGG GTCTGGCTCAGCCACCACAGGCCTATTTCAATGGCTCCCTTCCACCTCAGACAGTAGGACATCAGGCTCATGGAA GAGAACAGTCCACACTCCCAAGACAACACTCCCCATCTCTGGTAGTCAGACTGGCAGCTCTGGAGTGATCTCCC CTCAAGAGTTACTGAAGAAGCTTCAGATTGTACAGCAGGAGCAGCTGCATGCCTCTAACCGGCCAGCCTTGG CCGCTAAGTTTCCTGTGCTCGCTCAGAGCTCTGGAACAGGGAAACCCTTGGAATCCTGGATCAACAAGACACCCA ACACAGAACAGCAGACTCCTCTTTTCCAGGTCATCTCACCTCAGCGCATCCCTGCTACAGCAGCTCCGTCTCTGC TTATGTCCCCCATGGTGTTCGCACAACCCACCTCCGTCCCGCCAAAGGAAAGGAGAGGGAGAGCGGCCTCTTGCCTGTGG GAGGCCAGGAGCCACCTGCTGCCACCAGCCTCCTCCTGCCCATACAGAGCCCGGAGCCCTCCGTGATCACCA GCAGCCCACTCACCAAGCTCCAGCTCCAGGAGGCACTGCTGTACCTCATTCAGAATGATGACAACTTCTTAAATA TAATCTATGAAGCCTATCTCTTCAGCATGACTCAAGCAGCCATGAAAAAGACTATG<u>TGA</u>CAGCAAGGCCTTTTAA AACTGATTTTCAAGGTCCTTCTAGAACTCCGGCACAAGGTTCTTTCATGTTGAGTGTTGTTTCCTTCAATGTTTC

MAAVAAGGLVGKGRDISLAALQRHDPYINRIVDVASQVALYTFGHRANEWEKTDVEGTLFVYTRSASPKHGFTIM NRLSMENRTEPITKDLDFQLQDPFLLYRNARLSIYGIWFYDKEECQRIAELMKNLTQYEQLKAHQGTGAGISPVI LNSGEGKEVDILRMLIKAKDEYTKCKTCSEPKKITSSSAIYDNPNLIKPIPVKPSENQQQRIPQPNQTLDPEPQH LSLTALFGKQDKATCQETVEPPQTLHQQQQQQQQQEKLPIRQGVVRSLSYEEPRRHSPPIEKQLCPAIQKLMVR SADLHPLSELPENRPCENGSTHSAGEFFTGPVQPGSPHNIGTSRGVQNASRTQNLFEKLQSTPGAANKCDPSTPA PASSAALNRSRAPTSVTPVAPGKGLAQPPQAYFNGSLPPQTVGHQAHGREQSTLPRQTLPISGSQTGSSGVISPQ ELLKKLQIVQQEQQLHASNRPALAAKFPVLAQSSGTGKPLESWINKTPNTEQQTPLFQVISPQRIPATAAPSLLM SPMVFAQPTSVPPKERESGLLPVGGQEPPAAATSLLLPIQSPEPSVITSSPLTKLQLQEALLYLIQNDDNFLNII YEAYLFSMTQAAMKKTM

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ATCAGCCCCAAACAGGACGAAGGCGTGCTGAAGGTCATCAAGAGAGGGGCACAGGTACAGAAGATGCCCATGATT GGGGACCGAGTCTTTGTCCACTACACTGGCTGGCTATTAGATGGCACAAAGTTTGACTCCAGTCTGGATCGCAAG GACAAATTCTCCTTTGACCTGGGAAAAGGGGAGGTCATCAAGGCTTGGGACATTGCCATAGCCACCATGAAGGTG ATCATTCGCAGAATACAGACTCGCGGTGAAGGCTATGCTAAGCCCAATGAGGGTGCTATCGTGGAGGTTGCACTG GAAGGGTACTACAAGGACAAGCTCTTTGACCAGCGGGAGCTCCGCTTTGAGATTGGCGAGGGGGAGAACCTGGAT CTGCCTTATGGTCTGGAGAGGGCCATTCAGCGCATGGAGAAAGGAGAACATTCCATCGTGTACCTCAAGCCCAGC TATGCTTTTGGCAGTGTTGGGAAGGAAAAGTTCCAAATCCCACCAAATGCTGAGCTGAAATATGAATTACACCTC AAGAGTTTTGAAAAGGCCAAGGAGTCTTGGGAGATGAATTCAGAAGAGAAGCTGGAACAGAGCACCATAGTGAAA CTGGAATATGAGTCTAGTTTTTCCAATGAGGAAGCACAGAAAGCACAGGCCCTTCGACTGGCCTCTCACCTCAAC CTGGCCATGTGTCATCTGAAACTACAGGCCTTCTCTGCTGCCATTGAAAGCTGTAACAAGGCCCTAGAACTGGAC AGCAACAACGAGAAGGGCCTCTTCCGCCGGGGAGAGGCCCACCTGGCCGTGAATGACTTTGAACTGGCACGGGCT GATTTCCAGAAGGTCCTGCAGCTCTACCCCAACAACAAÁGCCGCCAAGACCCAGCTGGCTGTGTGCCAGCAGCGG GCCAAGGCAGAGGCTTCCTCAGGAGACCATCCCACTGACACAGAGATGAAGGAGGAGCAGAAGAGCAACACGGCA ${\tt GGGAGCCAGTCTCAGGTGGAGACAGAAGCA} {\color{red}{\bf TAG}} {\tt CCCCTCTCCACCAGCCCTACTCCTGCGGCTGCCTGCCCCCCAA}$ GTCTCCCCACTCCACCCTGTTAGTTTTGTAAAAACTGAAGAATTTTGAGTGAATTAGACCTTTATTTTTCTATCT GGTTGGATGGTGGCTTTAGGGGAAGGGGGAAAGGTGTAGGCTGGGGGGATTGAGGTGGGGAATCATTTTAGCTGGT TTTTGCTCCCTCTGTTAGGTCCATTTTCTAAGGGTAGAAGAGGCAAGTGGTAGGGATGAGGTCTGATAAGAACCC AGGGTGGAGAGGGAGACTCCTGGGCAGCCGTTTTCCTCATCCTTTCCCTCTCCCAGTCCATTTCCAAATGTGGCC TCCATGTGGGTGCTAGGGACATGGGAAAAACCACTGCTATGCCATTTCTTCTCTGTTCCCTTCCTCACCCCCG ACGGTGTGGCTGATGATGTCTTCTGGTGTCATGGTGACCACCCCTGTTCCCTGTTCTGGTATTTCCCCTGTCAG TTTCCCCTCTCGGCCAGGTTGTGTCCCAAAATCCCCTCAGCCTCTTCTCTGCACGTTGCTGAAGGTCCAGGCTTG

MTAEEMKATESGAQSAPLPMEGVDISPKQDEGVLKVIKREGTGTEMPMIGDRVFVHYTGWLLDGTKFDSSLDRKD KFSFDLGKGEVIKAWDIAIATMKVGEVCHITCKPEYAYGSAGSPPKIPPNATLVFEVELFEFKGEDLTEEEDGGI IRRIQTRGEGYAKPNEGAIVEVALEGYYKDKLFDQRELRFEIGEGENLDLPYGLERAIQRMEKGEHSIVYLKPSY AFGSVGKEKFQIPPNAELKYELHLKSFEKAKESWEMNSEEKLEQSTIVKERGTVYFKEGKYKQALLQYKKIVSWL EYESSFSNEEAQKAQALRLASHLNLAMCHLKLQAFSAAIESCNKALELDSNNEKGLFRRGEAHLAVNDFELARAD FQKVLQLYPNNKAAKTQLAVCQQRIRRQLAREKKLYANMFERLAEEENKAKAEASSGDHPTDTEMKEEQKSNTAG SQSQVETEA

 $\tt GTCGCGACGGGGGTTCAGGGAATATTTACTGGGCCTCTCCGCTCCTCTGCTCTTGGAGGTGCC{\color{red} \underline{ATG}} \\ \tt AGGTCAGT$ TAACGATACGTTAAATGAACTGGTGGTGGGAGACACCAGCGGGAAGGTGTCTGTGTATAAAAATGATGACAGTCG GCCATGGCTCACCTGTTCCTGCCAGGGAATGCTGACTTGCGCTGGGGTTGGAGACGTGTGTAATAAAGGAAAGAA TGGGCACCACGAGACACTAATCGGAGAGGAGCAGCGTCCAGTCTTCAAGCAGCACCATCCCTGCCAACACCAAGGT CATGCTGATCAGCGACATCGATGGAGATGGGTGTCGTGAGCTGGTGGTGGGCTACACAGACCGTGTGGTGCGAGC TTTCCGCTGGGAGGAGCTAGGTGAGGGTCCTGAACATCTGACAGGGCAGCTGGTGTCCCTCAAGAAATGGATGCT GGAGGGTCAGGTGGACAGCCTCTCAGTGACTCTGGGGCCACTGGGTCTTCCTGAACTGATGGTGTCTCAGCCAGG TTGTGCGTATGCAATTCTACTGTGTACCTGGAAAAAGGACACTGGGTCCCCTCCTGCCTCTGAAGGGCCCACGGA TGGTAGTAGGGAGACCCCAGCTGCCCGAGACGTGGTGCTGCACCAGACATCTGGCCGTATCCACAACAAGAATGT CTCCACTCACCTAATTGGCAACATCAAACAAGGCCACGGCACTGAGAGTAGTGGCTCTGGCCTCTTTGCCCTGTG CACCCTGGATGGGACACTGAAGCTCATGGAAGAAATGGAAGAAGCAGACAAGCTGCTGTGGTCAGTGCAGGTGGA TCACCAGCTCTTTGCCCTGGAGAAACTGGATGTCACCGGCAACGGGCATGAGGAGGTAGTTGCATGCGCCTGGGA TGGACAGACATATATCATTGATCACAACCGCACCGTCGTCCGCTTCCAAGTGGATGAAAATATCCGTGCCTTCTG TGCGGGCCTGTACGCCTGCAAAGAGGGCCGCAACAGCCCCTGCCTCGTATATGTCACTTTCAACCAGAAGATCTA TGTGTACTGGGAGGTGCAGCTGGAGCGGATGGAGTCTACCAATCTGGTGAAACTGCTGGAGACCAAGCCGGAGTA CCACAGCCTGCTGCAGGAGCTGGGCGTGGATCCTGACGACCTCCCTGTGACTCGTGCCCTGCTTCACCAAACGCT $\tt CTACCATCCAGACCAGCCACCACGTGTGCTCCCTCAAGCCTCCAGGATCCCACC\underline{TAG}CTGTACTTGCCTCATAG$ CTGGTGAAGGATTCTTCTGAACCCCCACCCTACCCCTAAAGGTATCTGTGGTATTGGCAGGATAGGGAATATGC ATTACAGAAATGCAGGATTTGACTCTGGGCATGAAAGATGGCAGCAGCCCTAGGGTGACCGTGAACTATAGACCT CGCAGTCTTTTCGGTGAAAGAAGAAGACAAGTTGACCCTCTGCCCATTTCCTTATGGACCTCACCCATCATGCCAG CAGGGTCATAGGACCCTGGCCTTGTTCCAAATCATCTGGGACATGACCCACTCCCCACTGTCACTGTTGAAAA CAGAGACTTGTTTGTGTGGCCCCAACACCCATAAGGAAACCAGGCTTTAGGCCCAGGGGAGCAGTGGAGGTAAGG GCTCCACCCCATCTTAAGCTCTGTCTTCCGTGGCACAATTCCAAGTTCTTGACGTTAGTAATTGTTAAAGGAATG GCAAACTGTTTTGTTTTGAAGGATCTTTCTACAGTCTGGTCTTACCCATGTTCCTAGCAACCCTGAGATGATTTT CTTCCATTTACCAAAGCAGCCGGGTCAGTGCCTTCTCACGTTGCCGTATTCTTCAGGTATTAGTCAGCTTCAGAA GCCCTGCTCCCATTTTTCCACCCACCCATTCCCCCATAAAACAGCTTATTGTCTCCAAGACAATAGACATTTAAA ATGTGATGCGGGTTTATGATCCAGACCACAATCAGAATTATATCTTGGGTCATTT

MRSVSYVQRVALEFSGSLFPHAICLGDVDNDTLNELVVGDTSGKVSVYKNDDSRPWLTCSCQGMLTCAGVGDVCN KGKNLLVAVSAEGWFHLFDLTPAKVLDASGHHETLIGEEQRPVFKQHIPANTKVMLISDIDGDGCRELVVGYTDR VVRAFRWEELGEGPEHLTGQLVSLKKWMLEGQVDSLSVTLGPLGLPELMVSQPGCAYAILLCTWKKDTGSPPASE GPTDGSRETPAARDVVLHQTSGRIHNKNVSTHLIGNIKQGHGTESSGSGLFALCTLDGTLKLMEEMEEADKLLWS VQVDHQLFALEKLDVTGNGHEEVVACAWDGQTYIIDHNRTVVRFQVDENIRAFCAGLYACKEGRNSPCLVYVTFN QKIYVYWEVQLERMESTNLVKLLETKPEYHSLLQELGVDPDDLPVTRALLHQTLYHPDQPPQCAPSSLQDPT

 $\tt CGGCGGCGACTGCAGTCTGGAGGGTCCACACTTGTGATTCTCAATGGAGAGTGAAAACGCAGATTCATA{\color{red}{\textbf{A}}\textbf{T}}\underline{\textbf{G}}AAA$ GCTAGCCCCGTCGGCCACTGATTCTCAAAAGACGGAGGCTGCCCCTTCCTGTTCAAAATGCCCCAAGTGAAACA TCAGAGGAGGAACCTAAGAGATCCCCTGCCCAACAGGAGTCTAATCAAGCAGGACCTCCAAGGAAGTGGCGGAG TCCAACTCTTGCAAGTTTCCAGCTGGGATCAAGATTATTAACCACCCCACCATGCCCAACACGCAAGTAGTGGCC CCCAACAAATTCATCCTCATCAGCTGTGGGGGAGCCCCAACTCAGCCTCCAGGACTCCGGCCTCAAACCCAAACC ${\tt AGCTATGATGCCAAAAGGACAGAAGTGACCCTGGAGACCTTGGGACCAAAACCTGCAGCTAGGGATGTGAATCTT}$ CCTAGACCACCTGGAGCCCTTTGCGAGCAGAAACGGGAGACCTGTGCAGATGGTGAGGCAGCAGCAGGCTGCACTATC AACAATAGCCTATCCAACATCCAGTGGCTTCGAAAGATGAGTTCTGATGGACTGGGCTCCCGCAGCATCAAGCAA GAGATGGAGGAAAAGGAGAATTGTCACCTGGAGCAGCGACAGGTTAAGGTTGAGGAGCCTTCGAGACCATCAGCG TCCTGGCAGAACTCTGTGTCTGAGCGGCCACCCTACTCTTACATGGCCATGATACAATTCGCCATCAACAGCACT GAGAGGAAGCGCATGACTTTGAAAGACATCTATACGTGGATTGAGGACCACTTTCCCTACTTTAAGCACATTGCC AAGCCAGGCTGGAAGAACTCCATCCGCCACAACCTTTCCCTGCACGACATGTTTGTCCGGGAGACGTCTGCCAAT GGCAAGGTCTCCTTCTGGACCATTCACCCCAGTGCCAACCGCTACTTGACATTGGACCAGGTGTTTAAGCCACTG GACCCAGGGTCTCCACAATTGCCCGAGCACTTGGAATCACAGCAGAAACGACCGAATCCAGAGCTCCGCCGGAAC ATGACCATCAAAACCGAACTCCCCCTGGGCGCACGGCGGAAGATGAAGCCACTGCTACCACGGGTCAGCTCATAC CTGGTACCTATCCAGTTCCCGGTGAACCAGTCACTGGTGTTGCAGCCCTCGGTGAAGGTGCCATTGCCCCTGGCG GCTTCCCTCATGAGCTCAGAGCTTGCCCGCCATAGCAAGCGAGTCCGCATTGCCCCCAAGGTGCTGCTAGCTGAG GAGGGGATAGCTCCTCTTTCTTCTGCAGGACCAGGGAAAGAGGAGAAACTCCTGTTTGGAGAAGGGTTTTCTCCT TTGCTTCCAGTTCAGACTATCAAGGAGGAAGAAATCCAGCCTGGGGAGGAAATGCCACACTTAGCGAGACCCATC AAAGTGGAGAGCCCTCCCTTGGAAGAGTGGCCCTCCCCGGCCCCATCTTTCAAAGAGGAATCATCTCACTCCTGG GAGGATTCGTCCCAATCTCCCACCCCAAGACCCAAGAAGTCCTACAGTGGGCTTAGGTCCCCAACCCGGTGTGTC TCGCAAATGCTTGTGATTCAACACAGGGAGAGGAGGAGGAGGAGCCGGTCTCGGAGGAAACAGCATCTACTGCCT CCCTGTGTGGATGAGCCGGAGCTGCTCTTCTCAGAGGGGCCCAGTACTTCCCGCTGGGCCGCAGAGCTCCCGTTC CCAGCAGACTCCTCTGACCTGCCTCCCAGCTCAGCTACTCCCAGGAAGTGGGAAGCCCTTTTAAGACACCCATT AAGGAAACGCTGCCCATCTCCTCCACCCGAGCAAATCTGTCCTCCCCAGAACCCCTGAATCCTGGAGGCTCACG CCCCAGCCAAAGTAGGGGGACTGGATTTCAGCCCAGTACAAACCTCCCAGGGTGCCTCTGACCCTTGCCTGAC CCCCTGGGGCTGATGGATCTCAGCACCACTCCCTTGCAAAGTGCTCCCCCCCTTGAATCACCGCAAAGGCTCCTC AGTTCAGAACCCTTAGACCTCATCTCCGTCCCCTTTGGCAACTCTTCTCCCTCAGATATAGACGTCCCCAAGCCA GGCTCCCCGGAGCCACAGGTTTCTGGCCTTGCAGCCAATCGTTCTCTGACAGAAGGCCTGGTCCTGGACACAATG AATGACAGCCTCAGCAAGATCCTGCTGGACATCAGCTTTCCTGGCCTGGACGACGACCCACTGGGCCCTGACAAC ATCAACTGGTCCCAGTTTATTCCTGAGCTACAGTAGAGCCCTGCCCTTGCCCCTGTGCTCAAGCTGTCCACCATC GCTCCCTGCTGCCTGATTATGCAAAAGTAGCAGTCACACCCTAGCCACTGCTGGGACCTTGTGTTCCCCAAGAGT ATCTGATTCCTCTGCTGTCCCTGCCAGGAGCTGAAGGGTGGGAACAACAAAGGCAATGGTGAAAAGAGATTAGGA ACCCCCAGCCTGTTTCCATTCTCTGCCCAGCAGTCTCTTACCTTCCCTGATCTTTGCAGGGTGGTCCGTGTAAA TAGTATAAATTCTCCAAATTATCCTCTAATTATAAATGTAAGCTTATTTCCTTAGATCATTATCCAGAGACTGCC AGAAGGTGGGTAGGATGACCTGGGGTTTCAATTGACTTCTGTTCCTTTGTTTAGTTTTGATAGAAGGGAAGACC TGCAGTGCACGGTTTCTTCCAGGCTGAGGTACCTGGATCTTGGGTTCTTCACTGCAGGGACCCAGACAAGTGGAT CTGCTTGCCAGAGTCCTTTTTGCCCCTCCCTGCCACCTCCCGTGTTTCCAAGTCAGCTTTCCTGCAAGAAAAA GTGTGGGTGCCCAGATGTGCGCTATTAGATGTTTCTCTGATAATGTCCCCAATCATACCAGGGAGACTGGCATTG AAAGCGAAGGTGGACCXAAAAAAAAAAAAAAAAAAAAAA

MKASPRRPLILKRRRLPLPVQNAPSETSEEEPKRSPAQQESNQAEASKEVAESNSCKFPAGIKIINHPTMPNTQV VAIPNNANIHSIITALTAKGKESGSSGPNKFILISCGGAPTQPPGLRPQTQTSYDAKRTEVTLETLGPKPAARDV NLPRPPGALCEQKRETCADGEAAGCTINNSLSNIQWLRKMSSDGLGSRSIKQEMEEKENCHLEQRQVKVEEPSRP SASWQNSVSERPPYSYMAMIQFAINSTERKRMTLKDIYTWIEDHFPYFKHIAKPGWKNSIRHNLSLHDMFVRETS ANGKVSFWTIHPSANRYLTLDQVFKPLDPGSPQLPEHLESQQKRPNPELRRNMTIKTELPLGARRKMKPLLPRVS SYLVPIQFPVNQSLVLQPSVKVPLPLAASLMSSELARHSKRVRIAPKVLLAEEGIAPLSSAGPGKEEKLLFGEGF SPLLPVQTIKEEEIQPGEEMPHLARPIKVESPPLEEWPSPAPSFKEESSHSWEDSSQSPTPRPKKSYSGLRSPTR CVSEMLVIQHRERRERSRSRRKQHLLPPCVDEPELLFSEGPSTSRWAAELPFPADSSDPASQLSYSQEVGGPFKT PIKETLPISSTPSKSVLPRTPESWRLTPPAKVGGLDFSPVQTSQGASDPLPDPLGLMDLSTTPLQSAPPLESPQR LLSSEPLDLISVPFGNSSPSDIDVPKPGSPEPQVSGLAANRSLTEGLVLDTMNDSLSKILLDISFPGLDEDPLGP DNINWSQFIPELQ

 $\tt CGAAGGCTGTGCGGTCTGCCAGGAGCTGCGGCCCGGTCCGGCCCGGGCTGGCATGGGTTGGAATTGGAGCCTATC$ $\verb|CCCCAACCCGAAGGCTAACAGCATCATGTGGTTACTAACTGTTCCTCATTCACCGGTTGATGCCTCCCAGAAAAA$ AACGCCGCCAGCCTTCCCAGAAAGCCCCGCTGCTGTTCCACCAACACCACTGGAGGGCCCCAAACACAGCTGTG ${\tt CATCTACACAGCTTCCCATCACTCGACAGGTGCCCAGCAAGCCCATTGACCACCACCATCACTTCCT}$ GGGTATCACCTGATTTTGATACAGCAGCAGGAAGCTTGTTCCCAGCCTACCAGAAACACCAAAACCGGGCGAGAC ACTCAAGTCGAAAACCTACCACCTCCAAGTTTCCACATCTAACTTTTGAGAGTCCGCAATCTTCCAGTTCAGAGA CATTGGGGATCCCCTTAATCCGAGAGTGCCCCAGTGAATCAGAAAAGGATGTTTCCAGAAGACCCTTAGTTCCAG TGCTCAGTCCCCAAAGCTGTGGGAACATGTCAGTGCAGGCACTTCAGAGCTTACCTTATGTGTTCATTCCACCTG ATATCCAGACCCCAGAGTCATCATCTGTGAAGGAAGAACTCATTCCCCAAGATCAGAAGGAAAACAGCCTTCTAA GCTGCACTCTTCACACTGGCACTCCTAATAGCCCAGAGCCTGGACCTGTTCTGGTTAAAGACACCCCCGAGGACA ${\tt GAAGCCAATTCCTTGTGAAAAGC\underline{TGA}CTGCCATCAGTAATCTCAATAGAAAAGAGATATGTTTTCTGGAGTCATA}$ AAGGAATTCAATTCCTAGGGTTTTTGTTTTTGTTTTTTGAGATGTAATATTGCTCTGTTGCCCAGGCTGGAGTGCA $\tt GTGGTATGATCTCACCTTACTGCAACCACCTTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCCAGTAG$ TGGCCAGGCTGGTCTCAAAATCCTGACCTCAAGTCATCTGCTGGCCTTGACCTCACAAAGTGCTGGCCCAGCCGA GATTTGTTTTCTAAGATACTTTGTGTCATGAACAGTTCAGTTTAGTGTCATGAACTATTCACTTCATATTTTTCT

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 $\label{thm:prkkropsokaplifhooplegpkhscastolpithtrovpskpidhstitswvspdfdtaagslfpayokhorrarhssrkpttskfphltfespossssetlgiplirecpsesekdvsrrplvpvlsposcgnmsvoaloslpyvfippdiotpesssvkeelipodokensllsctlhtgtpnspepgpvlvkdtpedkygikvtwrrrohlaylrergklsrsoflvks$

 ${\tt GGCACGAGGGTGGGAAAAG} \underline{\textbf{ATG}} {\tt GCGGCTGCCGCACAATCCCGGGTTGTCCGGGTCCTGTCAATGTCACGTTCTGC}$ CATTACTGCAATAGCCACATCTGTGTGTCACGGCCCACCCTGTCGCCAGCTTCATCATGCCCTCATGCCTCATGG GAAAGGTGGACGTTCCTCAGTCAGTGGGATTGTGGCCACTGTGTTTGGAGCAACAGGATTCCTGGGGCGATATGT TGTCAACCACCTTGGACGCATGGGGTCACAGGTAATCATACCCTATCGGTGTGATAAATATGACATCATGCACCT TCGTCCCATGGGTGACCTGGGCCAGCTTCTGTTTCTGGAATGGGACGCGAGAGATAAAGATTCTATCCGACGAGT AGTACAACACGCAATGTGGTCATCAATCTTATTGGACGAGACTGGGAAACCAAAAACTTTGATTTTGAGGATGT TCTGAATGCGAATATTAAAAGCTCTTCTAGATATTTGAGAAATAAGGCTGTTGGAGAGAAAGTAGTGAGAGATGC TATGCATCGGTTTGGTCCTATACCCCTTGGTTCCTTGGGCTGGAAGACAGTTAAACAACCAGTATATGTCGTAGA TGTATCCAAAGGAATTGTTAATGCAGTTAAGGATCCTGATGCCAATGGGAAATCCTTTGCTTTCGTTGGTCCCAG TCGGTACCTCCTTTTCCACCTGGTGAAGTACATCTTTGCTGTGGCTCACAGATTGTTCCTCCCATTCCCCTTGCC GCTTTTTGCCTATCGATGGGTAGCAAGAGTCTTTGAAATAAGCCCATTTGAGCCCTGGATAACAAGGGATAAAGT ${\tt GAAGCCGGCCAAGACCGTCAACATT} \underline{{\tt TAG}} {\tt TGCCTCCTGAGCAGCTCTTGGTTTTGGCGTCTTTTGGGTCGGCCCAT}$ GTGGTTTGAGCACCCAGCCAGGCGGTCTCTTTAGAGGATCCTGTACACAGTTCCACTATTAAAACATTTCAGGTT

MAAAAQSRVVRVLSMSRSAITAIATSVCHGPPCRQLHHALMPHGKGGRSSVSGIVATVFGATGFLGRYVVNHLGR
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VARVFEISPFEPWITRDKVERMHITDMKLPHLPGLEDLGIQATPLELKAIEVLRRHRTYRWLSAEIEDVKPAKTV
NI

CGCGGGAGCACGAGCTGCAGCACCTCCGGAAAGTTCAGGAGCCCTGGAAAGGAGAAGGAATAAGACGGCAGG AGGAAGAGAGAGAGAGGGTAGAATGGAAGAATCTCACTTCAATTCTAACCCGTACTTCTGGCCTTCTATCCCCAC AGTCTCAGGTCAGATCGAGAACACAATGTTCATCAACAAGATGAAGGATCAGCTGTTGCCAGAGAAGGGCTGTGG TCTGGCCCCACCTCACCACCTTGCTGACAGTGCCTGCCTCAGTGTCCCTGCCCTCAGGCATCAGTATGGA CACAGAGTCCAAGTCAGACCAGCTGACCCCACACAGCCAAGCGTCCGTTACCCAGAATATCACGGTGGTCCCTGT ${\tt TCCGGGTTTGGTAATCACGTCCCCTCAGGCTCTCTTGTGACCACAGCATCATCAGCTCAGACCTTCCCCATTTC}$ GGCTCCCATGATTGTCTCAGCTCTTCCCCCTGGCTCACAAGCCCTGCAGGTTGTCCCTGACCTCTCCAAGAAGGT TGATGACCATCAGAAAGACGGCAAGACCTACAGGTGCCGGATGTCCTCACTGACATTCTACTCCAAGTCGGAGAT GCAGATCCACTCCAAGTCACACCGAGACCAAGCCCCACAAGTGCCCACATTGCTCCAAGACCTTCGCCAACAG CTCCTACCTGGCCCAGCACATCCGTATACACTCAGGGGCTAAGCCCTACAGTTGTAACTTCTGTGAGAAATCCTT CCGCCAGCTCTCCCACCTTCAGCAGCACCCCGGATCCACTCCAAGATGCACACGGAGACCATCAAGCCCCACAA GTGCCCGCACTGCTCCAAGACCTTCGCCAACACCTCCTACCTGGCCCAGCACCTCCGTATCCACTCGGGGGCCCAA GCCCTACAACTGTTCCTACTGCCAGAAGGCCTTCCGCCAGCTCTCCCACCTCCAGCAGCACACACGAATCCACAC TGGTGATAGACCATACAAATGTGCACACCCAGGCTGTGAGAAAGCCTTCACACAACTCTCCAATCTGCAGTCCCA CAGACGGCAACACAACAAAGATAAACCCTTCAAGTGCCACAACTGTCATCGGGCGTACACGGATGCAGCCTCACT AGAGGTGCACCTGTCTACGCACACAGTGAAGCATGCCAAGGTGTACACCTGCACTATCTGCAGTCGGGCATACAC AGCAGCGGCAGCAGTGGCCCAGGCCCAGGCTCAAGCTCAAGCCCAGGCTCAGGCTCAAGCCCAAGCCCA ACACTTCCAGTCTCCTGGGGCAGCCCCCCAGGGTGGGGGTGGTGGGGACAGCAATCCCAACCCTCCACCCAGTG TTCCTTTGACCTGACCCCGTATAAGACGGCGGAGCATCATAAGGACATCTGCCTCACTGTCACCACCACCACCAT TCTTCTTCTCCAACTCTTGGTGGGAAAAGTCCTTTTCTTCCTTGACAGGCCTTGGCTCCATCTCCTTGGGCCTC TGTCACGGCTTTCCTTCACAGGATACCATCCTTTTTCTGAACTCTTCTTCAAAAGGAACATCAGCCCTCCTGATT GCAAAGGAATACTGAGCTGATGGTGTCATCCAGCAGCCTCCCCTCCCAAGCAAAGCTTCTAAAACTGGGGGTCGG TGCTCAAGGGAAGGATTTGCTATGACCTCATAGAAC

GGGCCGGAGTTCCTGCAGAGGGAGCGTCAAGGCCCTGTGCTGCTGTCCCTGGGGGCCCAGAGGGGTTGCCCAGCAT GCCCACTGGCAGGAGAGAGGGAACTGACCCACTTGCTCCTACCAGCTTCTGAAGGCTCCAAAGTCCGGAGTGCAG ${\tt AAAGCCAGGACCAAGAGACAGGCAGCTCACCAGGGTGGACAAATCGCCAGAG} \underline{\textbf{ATG}} \\ \texttt{TGGTGCATTGTCCTGTTTTC}$ ACTTTTGGCATGGGTTTATGCTGAGCCTACCATGTATGGGGAGATCCTGTCCCCTAACTATCCTCAGGCATATCC CAGTGAGGTAGAGAAATCTTGGGACATAGAAGTTCCTGAAGGGTATGGGATTCACCTCTACTTCACCCATCTGGA CATTGAGCTGTCAGAGAACTGTGCGTATGACTCAGTGCAGATAATCTCAGGAGACACTGAAGAAGGGAGGCTCTG TGGACAGAGGAGCAGTAACAATCCCCACTCTCCAATTGTGGAAGAGTTCCAAGTCCCATACAACAAACTCCAGGT GATCTTTAAGTCAGACTTTTCCAATGAAGAGCGTTTTACGGGGTTTGCTGCATACTATGTTGCCACAGACATAAA TGAATGCACAGATTTTGTAGATGTCCCTTGTAGCCACTTCTGCAACAATTTCATTGGTGGTTACTTCTGCTCCTG CCCCCGGAATATTTCCTCCATGATGACATGAAGAATTGCGGAGTTAATTGCAGTGGGGATGTATTCACTGCACT GATTGGGGAGATTGCAAGTCCCAATTATCCCAAACCATATCCAGAGAACTCAAGGTGTGAATACCAGATCCGGTT GGAGAAAGGGTTCCAAGTGGTGGTGACCTTGCGGAGAGAAGATTTTGATGTGGAAGCAGCTGACTCAGCGGGAAA CTGCCTTGACAGTTTAGTTTTTGTTGCAGGAGATCGGCAATTTGGTCCTTACTGTGGTCATGGATTCCCTGGGCC GAAACTTCGCTATCATGGAGATCCAATGCCCTGCCCTAAGGAAGACACTCCCAATTCTGTTTGGGAGCCTGCGAA GGCAAAATATGTCTTTAGAGATGTGGTGCAGATAACCTGTCTGGATGGGTTTGAAGTTGTGGAGGGACGTGTTGG TGCAACATCTTTCTATTCGACTTGTCAAAGCAATGGAAAGTGGAGTAATTCCAAACTGAAATGTCAACCTGTGGA CTACACTTGTGAGGAGCCATATTACTACATGGAAAATGGAGGAGGTGGGGAGTATCACTGTGCTGGTAACGGGAG CTGGGTGAATGAGGTGCTGGGCCCGGAGCTGCCGAAATGTGTTCCAGTCTGTGGAGTCCCCAGAGAACCCTTTGA AGAAAAACAGAGGATAATTGGAGGATCCGATGCAGATATTAAAAACTTCCCCTGGCAAGTCTTCTTTGACAACCC ATGGGCTGGTGGAGCGCTCATTAATGAGTACTGGGTGCTGACGGCTGCTCATGTTGTGGAGGGAAACAGGGAGCC AACAATGTATGTTGGGTCCACCTCAGTGCAGACCTCACGGCTGGCAAAATCCAAGATGCTCACTCCTGAGCATGT GTTTATTCATCCGGGATGGAAGCTGCTGGAAGTCCCAGAAGGACGAACCAATTTTGATAATGACATTGCACTGGT GCGGCTGAAAGACCCAGTGAAAATGGGACCCACCGTCTCTCCCATCTGCCTACCAGGCACCTCTTCCGACTACAA GGCGGCAAGGTTACCTGTAGCTCCTTTAAGAAAATGCAAAGAAGTGAAAGTGGAGAAACCCACAGCAGATGCAGA GGCCTATGTTTTCACTCCTAACATGATCTGTGCTGGAGGAGAGAGGGCATGGATAGCTGTAAAGGGGACAGTGG TGGGGCCTTTGCTGTACAGGATCCCAATGACAAGACCAAATTCTACGCAGCTGGCCTGGTGTCCTGGGGGCCCCA GTGTGGGACCTATGGGCTCTACACACGGGTAAAGAACTATGTTGACTGGATAATGAAGACTATGCAGGAAAAATAG CACCCCCGTGAGGACTAATCCAGATACATCCCACCAGCCTCTCCAAGGGTGGTGACCAATGCATTACCTTCTGT TCCTTATGATATTCTCATTATTTCATCATGACTGAAAGAAGACACGAGCGAATGATTTAAATAGAACTTGATTGT ${\tt CCTTAATTCTTTGTTTCCTCTTTACCTGTTCAAAATTCCATTTACTTGATCATTCTCAGTATCCACTGTCTATGT}$ ACAATAAAGGATGTTTATAAGC

MWCIVLFSLLAWVYAEPTMYGEILSPNYPQAYPSEVEKSWDIEVPEGYGIHLYFTHLDIELSENCAYDSVQIISG
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EAADSAGNCLDSLVFVAGDRQFGPYCGHGFPGPLNIETKSNALDIIFQTDLTGQKKGWKLRYHGDPMPCPKEDTP
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MKTMQENSTPRED

 ${\tt GCAGTACCTAAGCCGGAGCGGGGTAGAGGCGGGCCGGCCTCTCTGACCTCCAGTGCCGCCGGCCTCAAGAT}$ AGCTGTTGCTGGGGGCCGGCGCGTGGCCTACGGTGTGCGCGAATCTGTGTTCACCGTGGAAGGCGGGCACAGAG CCATCTTCTTCAATCGGATCGGTGGAGTGCAGCAGCACTATCCTGGCCGAGGGCCTTCACTTCAGGATCCCTT GGTTCCAGTACCCCATTATCTATGACATTCGGGCCAGACCTCGAAAAATCTCCTCCCCTACAGGCTCCAAAGACC TACAGATGGTGAATATCTCCCTGCGAGTGTTGTCTCGACCCAATGCTCAGGAGCTTCCTAGCATGTACCAGCGCC TAGGGCTGGACTACGAGGAACGAGTGTTGCCGTCCATTGTCAACGAGGTGCTCAAGAGTGTGGTGGCCAAGTTCA ATGCCTCACAGCTGATCACCCAGCGGGCCCAGGTATCCCTGTTGATCCGCCGGGAGCTGACAGAGAGGGCCAAGG ACTTCAGCCTCATCCTGGATGATGTGGCCATCACAGAGCTGAGCTTTAGCCGAGAGTACACAGCTGCTGTAGAAG CCAAACAAGTGGCCCAGCAGGAGGCCCAGCGGGCCCAATTCTTGGTAGAAAAAGCAAAGCAGGAACAGCGGCAGA AAATTGTGCAGGCCGAGGTGAGGCCGAGGCTGCCAAGATGCTTGGAGAAGCACTGAGCAAGAACCCTGGCTACA CAGCTGACAACCTTGTGCTGAACCTACAGGATGAAAGTTTCACCAGGGGAAGTGACAGCCTCATCAAGGGTAAGA GGGTCCAGCACAGCCCTACCCCGCCCCAGTATCATGCGATGGTCCCCCACACCGGTTCCCTGAACCCCTCTTGGA TTAAGGAAGACTGAAGACTAGCCCCTTTTCTGGGGAATTACTTTCCTCCTCCTGTGTTAACTGGGGCTGTTGGG

MAQNIKDLAGRIPAGPRGMGTALKILLGAGAVAYGVRESVFTVEGGHRAIFFNRIGGVQQDTILAEGIHFRIPWF QYPIIYDIRARPRKISSPTGSKDLQMVNISLRVLSRPNAQELPSMYQRLGLDYEERVLPSIVNEVLKSVVAKFNA SQLITQRAQVSLLIRRELTERAKDFSLILDDVAITELSFSREYTAAVEAKQVAQQEAQRAQFLVEKAKQEQRQKI VQAEGEAEAAKMLGEALSKNPGYIKLRKIRAAQNISKTIATSQNRIYLTADNLVLNLQDESFTRGSDSLIKGKK

3747/6881 FIGURE 3457A

ACGCCATACTGGACGCCAAGTGGGAGGAACTTCAAGGCTGTCCCCTGCGGGCCTCCCGCTCTGCTTCTGCGAAGG TTTCATTGAAAACAGATCCTGCAAAAGTTCCAGGTGCCCACACTGGAAACTTGGAGATCCTGCTTCCCAGACCAC AGCTGTGGGGAACTTGGGGTGGAGCAGAAGTTTCTGTATTCAGCTGCCCAGGCAGAGGAGAATGGGGTCTCCA GGCCCCGGGAAGAACTGAGATCGAGGGGCCGGCCTCCCCTGGAGGGGTCAGCACGTCCAGCAGTGATGGCAAAG CTGAGAAGTCCAGGCAGACAGCCAAGAAGGCCCGAGTAGAGGAAGCCTCCACCCCAAAGGTCAACAAGCAGGGTC GGAGTGAGGAGATCTCAGAGAGTGAAAGTGAGGAGACCAATGCACCAAAAAAGACCAAAACTGAGCAGGAACTCC CTCGGCCACAGTCTCCCTCCGATCTGGATAGCTTGGACGGCGGAGCCTTAATGATGATGGCAGCAGCAGCCCTA GGGATATCGACCAGGACAACCGAAGCACGTCCCCCAGTATCTACAGCCCTGGAAGTGTGGAGAATGACTCTGACT CAGACAGCACCCCTCGACAGCCAGAGGCTAGCTTTGAACCCCATCCTTCTGTGACACCCACTGGATATCATGCTC CCATGGAGCCCCCCACATCTCGAATGTTCCAGGCTCCTCCTGGGGCCCCTCCCCCTCACCCACAGCTCTATCCTG CTAATGGGGGTAAGCAGCACCCCCCCCCCCCCCTTTCCGTTTCAGTATCAAGCTCTGGGGCTAGTGGTGCTCCCC TGACACCGAACCTGCCTCCCCCACCTGCCCTGAGACCCCTCAACAATGCATCAGCCTCTCCCCCTGGCCTGGGGG CCCAACCACTACCTGGTCATCTGCCCTCTCCCCACGCCATGGGACAGGGTATGGGTGGACTTCCTCCTGGCCCAG AGAAGGGCCCAACTCTGGCTCCTTCACCCCACTCTCTGCCTCCTGCTTCTTCTGCTCCAGCGCCCCCCATGA GGTTTCCTTATTCATCCTCTAGTAGTAGCTCTGCAGCAGCCTCCTCTTCCAGTTCTTCCTCTCTTCCTCTGCCT CCTATGGCCGCCTCTTAGCCAACAGCAATGCCCATCCAGGCCCCTTCCCTCCTCTACTGGGGCCCAGTCCACCG CACACCTGCCCCCACCTCACAGCCAGGTGTCCTACAGCCAAGCAGGCCCCAATGGCCCTCCAGTCTCTTCCTCTT CCAACTCTTCCTCTCCACTTCTCAAGGGTCCTACCCATGTTCACACCCCTCCCCTTCCCAGGGCCCTCAAGGGG CGCCCTACCCTTTCCCACCGGTGCCTACGGTCACCACCTCTTCGGCTACCCTTTCCACGGTCATTGCCACCGTGG CTTCCTCGCCAGCAGGCTACAAAACGGCCTCCCCACCTGGGCCCCCACCGTACGGAAAGAGAGCCCCGTCCCCGG GCTATCGAGGAACCTCGCCACCTGCAGGCCCAGGGACCTTCAAGCCGGGCTCGCCCACCGTGGGACCTGGGCCCC TGCCACCTGCGGGGCCCTCAGGCCTGCCATCGCTGCCACCACCTGCGGCCCCTGCCTCAGGGCCGCCCCTGA GCGCCACGCAGATCAAACAGGAGCCGGCTGAGGAGTATGAGACCCCCGAGAGCCCGGTGCCCCAGCCCGCAGCC CCTCGCCCCCCCAAGGTGGTAGATGTACCCAGCCATGCCAGTCTGCCAGGTTCAACAACACCTGGATC GCGGCTTCAACTCGTGCGCGCGCGCGACCTGTACTTCGTGCCACTGGAGGGCTCCAAGCTGGCCAAGAAGCGGG AACGCGAGAAAGAGCGCGAGCGAGAAGGAGCGCGAGCTTGAACGCAGCGTGAAGTTGGCTCAGGAGGGCCGTG CTCCGGTGGAATGCCCATCTCTGGGCCCAGTGCCCCATCGCCCTCCATTTGAACCGGGCAGTGCGGTGGCTACAG TGCCCCCTACCTGGGTCCTGACACTCCAGCCTTGCGCACTCTCAGTGAATATGCCCGGCCTCATGTCATGTCTC CTGGCAATCGCAACCATCCATTCTACGTGCCCCTGGGGGCAGTGGACCCGGGGCTCCTGGGTTACAATGTCCCGG CCCTGTACAGCAGTGATCCAGCTGCCCGGGAGAGGGGAACGGGAAGCCCGTGAACGAGACCTCCGTGACCGCCTCA AGCCTGGCTTTGAGGTGAAGCCTAGTGAGCTGGAACCCCTACATGGGGTCCCTGGGCCGGGCTTGGATCCCTTTC CCCGACATGGGGGCCTGGCTCTGCACCTGGCCCACCTGCACCCTTTCCCCTTTCATCCGAGCCTGGGGC CCCTGGAGCGAGAACGTCTAGCGCTGGCAGCTGGGCCAGCCCTGCGGCCTGACATGTCCTATGCTGAGCGGCTGG CAGCTGAGAGGCAGCACGCAGAAAGGGTGGCGGCCCTGGGCAATGACCCACTGGCCCGGCTGCAGATGCTCAATG TGACTCCCCATCACCACCAGCACTCCCACATCCACTCGCACCTGCACCTGCACCAGCAAGATGCTATCCATGCAG CCTCTGCCTCGGTGCACCCTCTCATTGACCCCCTGGCCTCAGGGTCTCACCTTACCCGGATCCCCTACCCAGCTG

3748/6881 FIGURE 3457B

TCCATAGAGAAGATCTGGGCCCGGGAGATCCTGGACTCCCGCGGGAACCCCACAGTGGAGGTGGATCTCTATACT GCCAAAGGTCTTTTCCGGGCTGCAGTGCCCAGTGGAGCCTCTACGGGCATCTATGAGGCCCTGGAGCTGAGGGAT GGAGACAAACAGCGTTACTTAGGCAAAGGTGTCCTGAAGGCAGTGGACCACATCAACTCCACCATCGCGCCAGCC AACAAATCCAAGTTTGGGGCCAATGCCATCCTGGGTGTGTCTCTGGCCGTGTGTAAGGCAGGGGCAGCTGAGCGG GTGATCAATGGTGGCTCTCATGCTGGCAACAAGCTGGCCATGCAGGAGTTCATGATCCTCCCAGTGGGAGCTGAG AGCTTTCGGGATGCCATGCGACTAGGTGCAGAGGTCTACCATACACTCAAGGGAGTCATCAAGGACAAATACGGC AAGGATGCCACCAATGTGGGGGATGAAGGTGGCTTTGCCCCCCAATATCCTGGAGAACAGTGAAGCCTTGGAGCTG GTGAAGGAAGCCATCGACAAGGCTGGCTACACGGAAAAGATCGTTATTGGCATGGATGTTGCTGCCTCAGAGTTT TATCGTGATGGCAAATATGACTTGGACTTCAAGTCTCCCACTGATCCTTCCCGATACATCACTGGGGACCAGCTG GGGGCACTCTACCAGGACTTTGTCAGGGACTATCCTGTGGTCTCCATTGAGGACCCATTTGACCAGGATGATTGG GCTGCCTGGTCCAAGTTCACAGCCAATGTAGGGATCCAGATTGTGGGTGATGACCTGACAGTGACCAACCCAAAA $\tt CGTATTGAGCGGGCAGTGGAAGAAAGGCCTGCAACTGTCTGCTGCTCAAGGTCAACCAGATCGGCTCGGTCACT$ GAAGCCATCCAAGCTGCAAGCTGGCCCAGGAGAATGGCTGGGGGGTCATGGTGAGTCATCGCTCAGGAGAGACT ${\tt GAGGACACATTCATTGCTGACCTGGTGGTGGGGCTGTGCACAGGCCAGATCAAGACTGGTGCCCCGTGCCGTTCT}$ GAACGTCTGGCTAAATACAACCAGCTCATGAGAATTGAGGAAGAGCTGGGGGATGAAGCTCGCTTTGCCGGACAT $\texttt{AACTTCCGTAATCCCAGTGTGCTG} \underline{\textbf{TGA}} \\ \texttt{TTCCTCTGCTTGCCTGGAGACGTGGAACCTCTGTCTCATCCTCCTGGA} \\$ ACCTTGCTGTCCTGATCTGTGATAGTTCACCCCCTGAGATCCCCTGAGCCCCAGGGTGCCCAGAACTTCCCTGAT TGACCTGCTCCGCTGCTCCTTGGCTTACCTGACCTCTTGCTGTCTCTGCTCCCCTTTCTGTGCCCTACTCA ATTATAAAAGGGGGTCCGTGGAAGAATGATCAGCATCTGTGATGGGAGCGTCAGGGTTGGTGTGCTGAGGTGTTA GAGAGGGACCATGTGCCTTGTGCTCTTGTCCCACGTGTCTTCCACTTTGCATATGAGCCGTGAACTGT TTTATTTATTTTATTTGTTTTTCATTCATCCCATTAATCATTCCCCATAACTCAATGGCCTAAAACTGGCCTGA CTTGGGGGAACGATGTGTCTGTATTTCATGTGGCTGTAGATCCCAAGATGACTGGGGTGGGAGGTCTTGCTAGAA TGGGAAGGGTCATAGAAAGGGCCTTGACATCAGTTCCTTTGTGTGTACTCACTGAAGCCTGCGTTGGTCCAGAGC GGAGGCTGTGTGCCTGGGGGAGTTTTCCTCTATACATCTCTCCCCAACCCTAGGTTCCCTGTTCTTCCTCCAGCT GCACCAGAGCAACCTCTCACTCCCCATGCCACGTTCCACAGTTGCCACCACCTCTGTGGCATTGAAATGAGCACC TCCATTAAAGTCTGAATCAGTGC

MSIEKIWAREILDSRGNPTVEVDLYTAKGLFRAAVPSGASTGIYEALELRDGDKQRYLGKGVLKAVDHINSTIAP ALISSGLSVVEQEKLDNLMLELDGTENKSKFGANAILGVSLAVCKAGAAERELPLYRHIAQLAGNSDLILPVPAF NVINGGSHAGNKLAMQEFMILPVGAESFRDAMRLGAEVYHTLKGVIKDKYGKDATNVGDEGGFAPNILENSEALE LVKEAIDKAGYTEKIVIGMDVAASEFYRDGKYDLDFKSPTDPSRYITGDQLGALYQDFVRDYPVVSIEDPFDQDD WAAWSKFTANVGIQIVGDDLTVTNPKRIERAVEEKACNCLLLKVNQIGSVTEAIQACKLAQENGWGVMVSHRSGE TEDTFIADLVVGLCTGQIKTGAPCRSERLAKYNQLMRIEEELGDEARFAGHNFRNPSVL

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CCACAATAGGGGCAGACCTGTCCATCCTTCTCTGTGGGTCCCCTGTACCTTTCTCCCCCAACAGGATCAGACCCA CCCTCCCATACTCACCAAACCCTCTTCCCCACCACCCTGAGCTGAGGAGCACAGTTTGAGGCCCCCCAACCCCC GAGCCAGAGTGACCCCTCGACCTGTCAGCCAAGCAGATTGCAGATGCCAGGAAAGCCTGTGCTGACGTTACTCTGGCAGAGCTGGTGTCTGGCCTAGAGGTGGTG GGACGAGTCCAGATGCGGACGCGGACGTTAAGGGGACACCTGGCCAAGATTTACGCCATGCACTGGGCCACT GATTCTAAGCTGCTGGTAAGTGCCTCGCAAGATGGGAAGCTGATCGTGTGGGACAGCTACACCACCAACAAGGTG CACGCCATCCCACTGCGCTCCTCGGGTCATGACCTGTGCCTATGCCCCATCAGGGAACTTTGTGGCATGTGGG GGGCTGGACAACATGTGTTCCATCTACAACCTCAAATCCCGTGAGGGCAATGTCAAGGTCAGCCGGGAGCTTTCT GCTCACACAGGTTATCTCCCCGCTGCCGCCTTCCTGGATGACAACAATATTGTGACCAGCTCGGGGGACACCACG TGTGCCTTGTGGGACATTGAGACTGGGCAGCAGAAGACTGTATTTGTGGGACACACGGGTGACTGCATGAGCCTG GCTGTGTCTCCTGACTTCAATCTCTTCATTTCGGGGGCCTGTGATGCCAAGCTCTGGGATGTGCGAGAG GGGACCTGCCGTCAGACTTTCACTGGCCACGAGTCGGACATCAACGCCATCTGTTTCTTCCCCAATGGAGAGGCC ATCTGCACGGGCTCGGATGACGCTTCCTGCCGCTTGTTTGACCTGCGGGCAGACCAGGAGCTGATCTGCTTCTCC CACGAGAGCATCATCTGCGGCATCACGTCCGTGGCCTTCTCCCTCAGTGGCCGCCTACTATTCGCTGGCTACGAC GACTTCAACTGCAATGTCTGGGACTCCATGAAGTCTGAGCGTGTGGGCATCCTCTCTGGCCACGATAACAGGGTG AGCTGCCTGGGAGTCACAGCTGACGGGATGGCTGTGGCCACAGGTTCCTGGGACAGCTTCCTCAAAATCTGGAAC TCAGGAGGCTGGAGAAAGGGAAGTGGAAGGCAGTGAACACACTCAGCAGCCCCCTGCCCGACCCCATCTCATTCA GGTGTTCTCTTCTATATTCCGGGTGCCATTCCCACTAAGCTTTCTCCTTTGAGGGCAGTGGGGAGCATGGGACTG AGTCCTCACAGCCTCTCCCTTAATGAGCAAGGACAACCTGCCCCTCCCCAGCCCTTTGCAGGCCCAGCAGACTTG AGTCTGAGGCCCCAGGCCCTAGGATTCCTCCCCCAGAGCCACTACCTTTGTCCAGGCCTGGGTGGTATAGGGCGT TTGGCCCTGTGACTATGGCTCTGGCACCACTAGGGTCCTGGCCCTCTTCTTATTCATGCTTTCTCCTTTTTCTAC CTTTTTTTCTCTCCTAAGACACCTGCAATAAAGTGTAGCACCCTGGTA

MGEMEQLRQEAEQLKKQIADARKACADVTLAELVSGLEVVGRVQMRTRRTLRGHLAKIYAMHWATDSKLLVSASQ DGKLIVWDSYTTNKVHAIPLRSSWVMTCAYAPSGNFVACGGLDNMCSIYNLKSREGNVKVSRELSAHTGYLSCCR FLDDNNIVTSSGDTTCALWDIETGQQKTVFVGHTGDCMSLAVSPDFNLFISGACDASAKLWDVREGTCRQTFTGH ESDINAICFFPNGEAICTGSDDASCRLFDLRADQELICFSHESIICGITSVAFSLSGRLLFAGYDDFNCNVWDSM KSERVGILSGHDNRVSCLGVTADGMAVATGSWDSFLKIWN

TACGCCCACAGTGAAGCATGCCAAGGTGTACACCTGGACTATCTGCAGTCGGGGATACACATCCCAGGAAACATA AGTGGCCCAGGCCCAGGCTCAAGCCCAGGCTCAGGCTCAAGCCCAGGCCCAGGCCCAGGCCTC GTCTCCTGGGGCAGCCCCCCAGGGTGGGGGTGGTGGGGACAGCAATCCCAACCCTCCACCCCAGTGTTCCTTTGA CCTGACCCCGTATAAGACGGCGGAGCATCATAAGGACATCTGCCTCACTGTCACCACCAGCACCATCCAGGTGGA GCACCTGGCCAGCTCTTAGAGATCCGTGCTGCCACCCACTGGGAAGAGAAGAAGTAGTCCTGGTGTCTTCTTTC TCCAACTCTTGGTGGGAAAAGTCCTTTTCTTCCTTGACAGGCCTTGGCTCCATCTCCTTGGGCCTCTGTCACGGC TTTCCTTCACAGGATACCATCCTTTTTCTGAACTCTTCTTCAAAAGGAACATCAGCCCTCCTGATTGCAAAGGAA TACTGAGCTGATGGTGTCATCCAGCAGCCTCCCCTCCCAAGCAAAGCTTCTAAAACTGGGGGTCGGTGCTCAAGG GAAGGATTTGCTATGACCTCATAGAACCTTGTCCAGTGTGGCCACTTACCCTATCCTTACCCTCTTATCCTCAA AGTTTGGGCTGATGTAAGACTAGAGGCTGGCCCTCCCAGATAACAGAGAAAAGGGAGCCCCAAATGCAACCAGCC TCTTGTTCTATTCTTGCCTGCAAAAGAACAGAGGTTTCTCAAATGCCTCAGTCCCTGAGAGCCATTTCTTCCCCT ACATCGTCTCACTTTGCTTCCTATTGACTGCTGGTAGAAGGAGATTTGGGGTAGGGGCTAGACCTCCTTTTATTT GAAGGGGCAAGGGCTGAGATGTGGTCCCCAAGGGGCCAGAAATTCCCAAGTTGGTCACAGGTGGCTTAGAAGTG GGAGAGTTCAAGGCAAACGCAAGGACTGGACTTAGCTCCCTAGGTGCCACAGTCAGATGCCGGACACGGATTTAT TGTCCTCTAGCCACAGCATTTTTCTTTTTGTC

GCCGAGGGGGCGTACGGAGGTGGCAGCTGTGGGAGGAGCCGGCGTGGAAGGCCGAGGAGCTCAAGCCCGGACCA CCGAATCGGGCACTGTGTGGAGCCCCCTGGAGCTGAGATCAGGATCTTCATGAGGGACGTGGAGCCTGA GGATCCCATGTTCCTGATGGATCCCTTTGCTATTCACCGTCAGCATATGAGCCGTATGTTGTCAGGTGGCTTTGG GATTGGAAACATGGAACACTGACAGCTGGAGGCAATTGCCAGACCTTCTCATCTTCCACTGTCATCTCCTACTC CAATACGGGTGATGGTGCCCCCAAGGTCTACCAAGAGACATCAGAGATGCGCTCGGCACCAGGCGGGATCCGGGA GACACGGAGGACTGTTCGGGATTCAGACAGTGGACTGGAGCAGATGTCCATTGGGCATCACATCCGGGACAGGGC TCACATCCTCCAGCGCTCCCGAAACCATCGCACGGGGGACCAGGAGGAGCGGCAGGACTATATCAACCTGGATGA GAGTGAGGCCGCAGCGTTTGATGACGAGTGGCGGCGGGAGACCTCCCGATTCCGGCAGCAGCGTCCCCTGGAGTT TCGGCGGCTTGAGTCCTCAGGGGCTGGGGGACGAAGGGCGGAGGGGCCTCCCCGCCTGGCCATCCAGGGACCTGA GGACTCCCCTTCCCGACAGTCCCGCCGCTATGACTGGTGAGGCCCCGGGCCCTCAGCCTCTCTTGTACAGGCTGA GAGGCTGAGAAATCATCCCCTGAATAACTTTTTCCTCTCGATTCCCATCCCCAATTTAATATAAATTAACAGGC AAGCCGGCCCCACCTCTCCCTGGGGGTCTCAGGGAGAACCTTTCACGGCACCCTTTCCCTACCTTTTCCTTCTT TAATCTCCTGGTTTACCATTGATGACTTCGCCTCTGCATCTACTGACTTGATTTTTCATTCTGCCACTCCATCTT CAAACCCCTCACCTTTCCCATCCTACTCCTGCCATGCATTGAAGGGTCAATGCATTTTGGGGTGAGCTCTGGGT TTAGGGGCCCCTCCATCCCTCAGCTACCCTGGATCTTTGCCCACCTCTTCCTCAGAGCCCCCACTGAGGGGCCG GAATCTTCCCTACACCCTTCTCTGCCTTTATTTTTTGATTTGTGCAACTTGTAACTAGGTGTTTATGGAATAAAG

MFRFMRDVEPEDPMFLMDPFAIHRQHMSRMLSGGFGYSPFLSITDGNMPGTRPASRRMQQAGAVSPFGMLGMSGG FMDMFGMMNDMIGNMEHMTAGGNCQTFSSSTVISYSNTGDGAPKVYQETSEMRSAPGGIRETRRTVRDSDSGLEQ MSIGHHIRDRAHÏLQRSRNHRTGDQEERQDYINLDESEAAAFDDEWRRETSRFRQQRPLEFRRLESSGAGGRRAE GPPRLAIQGPEDSPSRQSRRYDW

3759/6881 FIGURE 3468A

GCGGCTCCGGGTGACTCGGGCCAGTGTAGAGGTCCTCAGGCCGGCAGGAGCAGCTGGGCCAATTCCCTGGCC GGGAGCGGAAGGGGATGCCTCGGGCCTGGGCTCCCCGTCCCCTGCTCGGCGGCAGTGAGGAGGAGGATATGG ATGCACTTTTGAACAACAGCCTGCCCCCACCCACCCAGAAAATGAAGAGGACCCAGAAGAGAGATTTGTCAGAAA CAGAGACTCCAAAGCTCAAGAAGAAGAAAAAGCCTAAGAAACCTCGGGACCCTAAAATCCCTAAGAGCCAAGCCCC AAAAAAGGGGCCTATGCTCTTATGCCGGCAGCTGGGGGACAGCTCTGGGGAGGGGCCCAGAGTTTGTGGAGGAGG AGGAAGAGGTGGCTCTGCGCTCAGACAGTGAGGGCAGCGACTATACTCCTGGCAAGAAGAAGAAGAAGAAGCTTG GACCTAAGAAAGAGAAGAGAGCAAATCCAAGCGGAAGGAGGAGGAGGAGGATGATGATGATGATTATCAA AGGAGCCTAAATCATCTGCTCAGCTCCTGGAAGACTGGGGCATGGAAGACATTGACCACGTGTTCTCAGAGGAGG ATTATCGAACCCTCACCAACTACAAGGCCTTCAGCCAGTTTGTCAGACCCCTCATTGCTGCCAAAAATCCCAAGA TTGCTGTCTCCAAGATGATGATGGTTTTGGGTGCAAAATGGCGGGAGTTCAGTACCAATAACCCCTTCAAAGGCA GTTCTGGGGCATCAGTGGCAGCTGCGGCAGCAGCAGCGGTAGCTGTGGTGGAGAGCATGGTGACAGCCACTGAGG TTGCACCACCACCTCCCCTGTGGAGGTGCCTATCCGCAAGGCCAAGACCAAGGAGGGCCAAAGGTCCCAATGCTC GGAGGAAGCCCAAGGGCAGCCCTCGTGTACCTGATGCCAAGAAGCCTAAACCCAAGAAAGTAGCTCCCCTGAAAA TCAAGCTGGGAGGTTTTGGTTCCAAGCGTAAGAGATCCTCGAGTGAGGATGATGACTTAGATGTGGAATCTGACT TCGATGATGCCAGTATCAATAGCTATTCTGTTTCTGATGGTTCCACCAGCCGTAGTAGCCGCAGCCGCAAGAAAC ACTATTGCGAGGTGTGCCAGCAAGGCGGTGAGATCATCCTGTGTGATACCTGTCCCCGTGCTTACCACATGGTCT GGGAAGCTAAAGAGGACAATTCGGAGGGTGAGGAGATCCTGGAAGAGGTTGGGGGAGACCTCGAAGAGGAGGATG ACCACATCCACTGCCTGAATCCCCCACTTCCAGAGATCCCCAACGGTGAATGGCTCTGTCCCCGTTGTACGTGTC CAGCTCTGAAGGGCAAAGTGCAGAAGATCCTAATCTGGAAGTGGGGTCAGCCACCATCTCCCACACCAGTGCCTC GGCCTCCAGATGCTGATCCCAACACGCCCTCCCCAAAGCCCTTGGAGGGGCGGCCAGAGCGGCAGTTCTTTGTGA AATGGCAAGGCATGTCTTACTGGCACTGCTCCTGGGTTTCTGAACTGCAGCTGGAGCTGCACTGTCAGGTGATGT TCCGAAACTATCAGCGGAAGAATGATATGGATGAGCCACCTTCTGGGGGACTTTGGTGGTGATGAAGAGAAAAGCC GAAAGCGAAAGAACAAGGACCCTAAATTTGCAGAGATGGAGGAACGCTTCTATCGCTATGGGATAAAACCCGAGT GGATGATCACCCGAATCCTCAACCACAGTGTGGACAAGAAGGGCCACGTCCACTACTTGATCAAGTGGCGGG ACTTACCTTACGATCAGGCTTCTTGGGAGAGTGAGGATGTGGAGATCCAGGATTACGACCTGTTCAAGCAGAGCT ATTGGAATCACAGGGAGTTAATGAGGGGTGAGGAAGGCCGACCAGGCAAGAAGCTCAAGAAGGTGAAGCTTCGGA AGTTGGAGAGGCCTCCAGAAACGCCAACAGTTGATCCAACAGTGAAGTATGAGCGACAGCCAGAGTACCTGGATG CTACAGGTGGAACCCTGCACCCCTATCAAATGGAGGGCCTGAATTGGTTGCGCTTCTCCTGGGCTCAGGGCACTG AGGGTCATTCCAAAGGCCCCTTCCTAGTGAGCGCCCCTCTTTCTACCATCATCAACTGGGAGCGGGAGTTTGAAA TGTGGGCTCCAGACATGTATGTCGTAACCTATGTGGGTGACAAGGACAGCCGTGCCATCATCCGAGAGAATGAGT TCTCCTTTGAAGACAATGCCATTCGTGGTGGCAAGAAGGCCTCCCGCATGAAGAAGAGGCATCTGTGAAATTCC ACAAGCTGTTGCTGACTGGGACACCATTACAAAACAATCTGGAAGAGTTGTTTCATCTGCTCAACTTTCTCACCC CCGAGAGGTTCCACAATTTGGAAGGTTTTTTGGAGGAGTTTGCTGACATTGCCAAGGAGGACCAGATAAAAAAAC TGCATGACATGCTGGGGCCGCACATGTTGCGGCGGCTCAAAGCCGATGTGTTCAAGAACATGCCCTCCAAGACAG AACTAATTGTGCGTGTGGAGCTGAGCCCTATGCAGAAGAAATACTACAAGTACATCCTCACTCGAAATTTTGAAG CACTCAATGCCCGAGGTGGTGGCAACCAGGTGTCTCTGCTGAATGTGGTGATGGATCTTAAGAAGTGCTGCAACC ATCCATACCTCTTCCCTGTGGCTGCAATGGAAGCTCCTAAGATGCCTAATGGCATGTATGATGGCAGTGCCCTAA TCAGAGCATCTGGGAAATTATTGCTGCTGCAGAAAATGCTCAAGAACCTTAAGGAGGGTGGGCATCGTGTACTCA TCTTTTCCCAGATGACCAAGATGCTAGACCTGCTAGAGGATTTCTTGGAACATGAAGGTTATAAATACGAACGCA TCGATGGTGGAATCACTGGGAACATGCGGCAAGAGGCCATTGACCGCTTCAATGCACCGGTGCTCAGCAGTTCT CTGACTGGAACCCCCATAATGACATTCAGGCCTTTAGCAGAGCTCACCGGATTGGGCAAAATAAAAAGGTAATGA

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3760/6881 FIGURE 3468B

TCTACCGGTTTGTGACCCGTGCGTCAGTGGAGGAGCGCATCACGCAGGTGGCAAAGAAGAAAATGATGCTGACGC ATCTAGTGGTGCGGCCTGGGCTCGAGGCTGGATCTATGTCCAAACAGGAGCTTGATGATATCCTCAAAT TTGGCACTGAGGAACTATTCAAGGATGAAGCCACTGATGGAGGAGAGAACAACAAGAGGGAGAAGATAGCAGTG TTATCCACTACGATGATAAGGCCATTGAACGGCTGCTAGACCGTAACCAGGATGAGACTGAAGACACAGAATTGC AGGGCATGAATGAATATTTGAGCTCATTCAAAGTGGCCCAGTATGTGGTACGGGAAGAAGAAATGGGGGAGGAAG AGGAGGTAGAACGGGAAATCATTAAACAGGAAGAAAGTGTGGATCCTGACTACTGGGAGAAATTGCTGCGGCACC ATTATGAGCAGCAGCAGCAGAAGATCTAGCCCGAAATCTGGGCAAAGGAAAAAGAATCCGTAAACAGGTCAACTACA ATGATGGCTCCCAGGAGGACCGAGATTGGCAGGACGACCAGTCCGACAACCAGTCCGATTACTCAGTGGCTTCAG AGGAAGGTGATGAAGACTTTGATGAACGTTCAGAAGCTCCCCGTAGGCCCAGTCGTAAGGGCCTGCGGAATGATA AAGATAAGCCATTGCCTCCTCTGTTGGCCCGTGTTGGTGGGAATATTGAAGTACTTGGTTTTAATGCTCGTCAGC GAAAAGCCTTTCTTAATGCAATTATGCGATATGGTATGCCACCTCAGGATGCTTTTACTACCCAGTGGCTTGTAA GAGACCTGCGAGGCAAATCAGAGAAAGAGTTCAAGGCATATGTCTCTCTTTTCATGCGGCATTTATGTGAGCCGG GGGCAGATGGGGCTGAGACCTTTGCTGATGGTGTCCCCCGAGAAGGCCTGTCTCGCCAGCATGTCCTTACTAGAA TTGGTGTTATGTCTTTGATTCGCAAGAAGGTTCAGGAGTTTGAACATGTTAATGGGCGCTGGAGCATGCCTGAAC TGGCTGAGGTGGAGGAAAACAAGAAGATGTCCCAGCCAGGGTCACCCTCCCCAAAAACTCCTACACCCTCCACTC CAGGGGACACGCAGCCCAACACTCCTGCACCTGTCCCACCTGCTGAAGATGGGATAAAAATAGAGGAAAATAGCC TCAAAGAAGAAGAGAGCATAGAAGGAGAAAAGGAGGTTAAATCTACAGCCCCTGAGACTGCCATTGAGTGTACAC CAGAGGTGAAGGAGAACAGAGGAACCTATGGAGACAGAGCCCAAAGGTGCTGCTGATGTAGAAGGTGGAGG AGGTGATGCTTCAGAATGGAGAGCCCCCAAGGACCTGAATGATGAGAAACAGAAGAAAAATATTAAACAACGTT TCATGTTTAACATTGCAGATGGTGGTTTTACTGAGTTGCACTCCCTTTGGCAGAATGAAGAGCGGGCAGCCACAG TTACCAAGAAGACTTATGAGATCTGGCATCGACGGCATGACTACTGGCTGCTAGCCGGCATTATAAACCATGGCT ATGCCCGGTGGCAAGACATCCAGAATGACCCACGCTATGCCATCCTCAATGAGCCTTTCAAGGGTGAAATGAACC GTGGCAATTTCTTAGAGATCAAGAATAAATTTCTAGCTCGAAGGTTTAAGCTCTTAGAACAAGCTCTGGTGATTG AGGAACAGCTGCGCCGGGCTGCTTACTTGAACATGTCAGAAGACCCTTCTCACCCTTCCATGGCCCTCAACACCC GCTTTGCTGAGGTGGAGTGTTTGGCGGAAAGTCATCAGCACCTGTCCAAGGAGTCAATGGCAGGAAACAAGCCAG CCAATGCAGTCCTGCACAAAGTTCTGAAACAGCTGGAAGAACTGCTGAGTGACATGAAAGCTGATGTGACTCGAC ${\tt TCCCAGCTACCATTGCCCGAATTCCCCCAGTTGCTGAGGTTACAGATGTCAGAGCGTAACATTCTCAGCCGCC}$ $\tt TGGCAAACCGGGCACCCGAACCTACCCCACAGCAGGTAGCCCAGCAGCAGCAGTGAAGATGCAGACTGATACCACCTC$ ${\tt CACCGCTGAGCAGTGACCTTCCTCACTTTCTCTTGTCCCAGCTTCTCCCCTGGGGGCCTGAGAGACCCTCACCTT}$ TGCCCTTCCTGCAGAAGAGACATGCAGCAGTAGCGCTGGCGCCATCTGCAGGAGCTGGCGGGCTGGCCTTCTGGA CCCTGGCTTCTCCCCACTGTAACGCCTGTTACACACAAACTGTTGTGGGTTCCTGCCAGGCTTGAAGAAAATGAT CTGAATTTTTCCTCCTTTTGGTTTTATTTTGTTGGTTTATTTTGTGTTTTTCTTCTCTTTTTTGGGGGGTATT CAGAGTGGGCTGGGCCCTGGGCGAGACACAGCTACCTCTGTTGGCATCTTTTTAATACCAGGAACCCAGCGGCT AGCAAATTTCTTGATGAAAATTGAAAATAAAAGTTTCCTTGT

MASGLGSPSPCSAGSEEEDMDALLNNSLPPPHPENEEDPEEDLSETETPKLKKKKKPKKPRDPKIPKSKRQKKER MLLCROLGDSSGEGPEFVEEEEEVALRSDSEGSDYTPGKKKKKKLGPKKEKKSKSKRKEEEEEDDDDDDDSKEPKS SAQLLEDWGMEDIDHVFSEEDYRTLTNYKAFSQFVRPL1AAKNPK1AVSKMMMVLGAKWREFSTNNPFKGSSGAS VAAAAAAVAVVESMVTATEVAPPPPPVEVPIRKAKTKEGKGPNARRKPKGSPRVPDAKKPKPKKVAPLKIKLGG FGSKRKRSSSEDDDLDVESDFDDASINSYSVSDGSTSRSSRKKLRTTKKKKKGEEEVTAVDGYETDHQDYCEV CQQGGEIILCDTCPRAYHMVCLDPDMEKAPEGKWSCPHCEKEGIQWEAKEDNSEGEEILEEVGGDLEEEDDHHME FCRVCKDGGELLCCDTCPSSYHIHCLNPPLPEIPNGEWLCPRCTCPALKGKVQKILIWKWGQPPSPTPVPRPPDA DPNTPSPKPLEGRPERQFFVKWQGMSYWHCSWVSELQLELHCQVMFRNYQRKNDMDEPPSGDFGGDEEKSRKRKN KDPKFAEMEERFYRYGIKPEWMMIHRILNHSVDKKGHVHYLIKWRDLPYDQASWESEDVEIQDYDLFKQSYWNHR ELMRGEEGRPGKKLKKVKLRKLERPPETPTVDPTVKYERQPEYLDATGGTLHPYQMEGLNWLRFSWAQGTDTILA DEMGLGKTVQTAVFLYSLYKEGHSKGPFLVSAPLSTIINWEREFEMWAPDMYVVTYVGDKDSRAIIRENEFSFED NAIRGGKKASRMKKEASVKFHVLLTSYELITIDMAILGSIDWACLIVDEAHRLKNNQSKFFRVLNGYSLQHKLLL TGTPLONNLEELFHLLNFLTPERFHNLEGFLEEFADIAKEDQIKKLHDMLGPHMLRRLKADVFKNMPSKTELIVR VELSPMQKKYYKYILTRNFEALNARGGGNQVSLLNVVMDLKKCCNHPYLFPVAAMEAPKMPNGMYDGSALIRASG $\verb|KLLLLQKMLKNLKEGGHRVLIFSQMTKMLDLLEDFLEHEGYKYERIDGGITGNMRQEAIDRFNAPGAQQFCFLLS| \\$ TRAGGLGINLATADTVIIYDSDWNPHNDIQAFSRAHRIGQNKKVMIYRFVTRASVEERITQVAKKKMMLTHLVVR PGLGSKTGSMSKQELDDILKFGTEELFKDEATDGGGDNKEGEDSSVIHYDDKAIERLLDRNQDETEDTELQGMNE YLSSFKVAQYVVREEEMGEEEEVEREIIKQEESVDPDYWEKLLRHHYEQQQEDLARNLGKGKRIRKQVNYNDGSQ EDRDWODDOSDNQSDYSVASEEGDEDFDERSEAPRRPSRKGLRNDKDKPLPPLLARVGGNIEVLGFNARQRKAFL NAIMRYGMPPODAFTTOWLVRDLRGKSEKEFKAYVSLFMRHLCEPGADGAETFADGVPREGLSRQHVLTRIGVMS LIRKKVOEFEHVNGRWSMPELAEVEENKKMSQPGSPSPKTPTPSTPGDTQPNTPAPVPPAEDGIKIEENSLKEEE SIEGEKEVKSTAPETAIECTQAPAPASEDEKVVVEPPEGEEKVEKAEVKERTEEPMETEPKGAADVEKVEEKSAI DLTPIVVEDKEEKKEEEEKKEVMLQNGETPKDLNDEKQKKNIKQRFMFNIADGGFTELHSLWQNEERAATVTKKT YEIWHRRHDYWLLAGIINHGYARWQDIQNDPRYAILNEPFKGEMNRGNFLEIKNKFLARRFKLLEQALVIEEQLR RAAYLNMSEDPSHPSMALNTRFAEVECLAESHQHLSKESMAGNKPANAVLHKVLKQLEELLSDMKADVTRLPATI ARIPPVAVRLOMSERNILSRLANRAPEPTPQQVAQQQ .

 $\texttt{CACCGGTCTGCATCTCCCAGCAGAAGGCGCAGCC} \underline{\textbf{ATG}} \\ \texttt{ATCCGTTATTCGGCCCCAACCTCTTCCTCCTGCAGCA}$ GGAGCAGCAGGGCCTGGCCGGGCCACTGGGGGACTCACTGGGAGGCGACCACTTCGCCGGGGGAGGAGACTTGCC CCCGGCGCTCTCTCGCCGGCCCGGCCCTGCTGCCTACTCGCCGCCCGGGCCGGGCCCGGCCCGCCTGCCGCCAT GGCCCTCCGCAATGACCTGGGCTCCAACATCAACGTGCTCAAGACCCTGAACCTCCGGTTCCGCTGCTTCCTGGC CAAGGTGCATGAGCTGGAGCGCCGGAACCGGCTGTTGGAGAAGCAACTGCAGCAAGCGCTGGAGGAGGGTAAGCA GCAGCTGGGCGCCGGCCGCTGTCTGCAGCCCTTCGGCGCGCGTGCTGGGCTCGCCCGCGCGCTCCCCGGC CGGCCCCTCGCGCCCCCCGCGGCCAGCCTCTCGTCGTCCTCCACCTCCACCTCCACCACCTATTCCTCGTCGGC CCGCTTCATGCCCGGCACCATCTGGTCGTTCTCGCACGCCCGGCCCGGCTCGGGCCCGGGACTGGAGCCCACTCTGGT GCAAGGGCCTGGCTTGTCGTGGGTGCACCCGGATGGGGTGGGCGTCCAGATCGACACCATCACGCCCGAGATCCG CGCTCTCTACAACGTGCTGGCCAAAGTGAAGCGGGAGCGGGACGAGTACAAGCGGAGATGCTTTTACAGGGTTAA TGTGCGACTGAAGGTGGGAAGAGGAGTACACGGTGCGGATCCAGCTGCAAGACCGTGTAAATGAGCTCCAGGAGG AAGCCCAGGAGGCTGATGCCTGCCAGGAGGAGCTGGCACTGAAGGTGGAACAGTTGAAGGCTGAGCTGGTGGTCT TCAAGGGGCTCATGAGTAACAACCTGTCGGAGCTGGACACCAAGATCCAGGAGAAAGCCATGAAGGTGGATATGG ACATCTGCCGCCGCATCGACATCACCGCCAAGCTCTGCGATGTGGCTCAGCAGCGCAACTGCGAGGACATGATCC AGATGTTCCAGGTCCCATCCATGGGGGGGGGGGAGCGGAGCGCAAGGCTGCCGTCGAGGAGGACACCTCCCTGT CGGAGAGTGAGGGGCCCCGCCAGCCCGATGGGGATGAGGAGGAGGAGCACAGCCCTCAGCATCAACGAGGAGATGC AGCGCATGCTCAACCAGCTGAGGGAGTATGATTTTGAGGACGACTGTGACAGCCTGACTTGGGAGGAGACTGAGG AGACCCTGCTTTTGGGAGGATTTCTCAGGCTATGCCATGGCAGCTGCAGAGGCCCCAGGGAGAGCAGCAGGAAG ATAGCCTGGAGAAGGTGATTAAAGATACGGAGTCCCTGTTCAAAACCCGGGAGAAGGAGTATCAGGAGACCATTG ACCAGATAGAGCTGGAGTTGGCCACGGCCAAGAACGACATGAACCGGCACCTGCACGAGTACATGGAGATGTGCA GCATGAAGCGCGGCCTGGACGTGCAGATGGAGACCTGCCGCCGGCTCATCACCCAGTCTGGAGACCGAAAGTCTC CATCTGACAGCTCCATGAGATAGAGACCTGCCTCCCCCTTGCACCCGAGGCCCTCGCAGCAGGAGCTCAGCGAG GCAGAGGGTGGGGCTGCACAGAGGGGAACATCAGCTGCAGCTCTGCACCAGGCCGGTCCCTGGGGACTGGGGCCC TCCTCCCTCAGGCTTTCTCCCTCAGTCTTGGCTTCTCCAGGGCTCTGGGGTGTCTGGAGCTAGGCTTGGCCCTAC CATTCTGGGGCCATTTCCACCACAGTTGGGGCTCTCCTGCCTTCACGCGTGGGTGTCTGCTACTTCCCCATCTTT AAAATGCTGCCAGAGCGATTGCGGCCCCTCACCTTGTCCACGTATCAGGAATGTGAATGTGGGACCTTTCCTCCA TCCCTGTTGTCCGGAGCCAGCTCACTGTCTTCCACACTGGTGCTAACTGGCCCAGGCACTGGAGTGGAATAGAAT GCAGCTGGAGGCTACGCATGGCCTCTGCAGCACACGCAGCTGGAGAGGGCTTCTGTCCCTGTCAGCGGCAGAGGG CGTTGGGGCTGGCCGGGGCACCTTGTCCCTGCTATGGTCCACATGCTCACGCTGTCCACCTGCCAGGTGGAGTGT ATGTGGCTGTGGCCCTCCTCGTGGAGGTGCCGTGCTTTAAAGAGGCCTTAGTGCCCGGGATGGGCACAGTGTTT GAGACCAACAGGCTACAGTGTCCCTGATTCTTGGAAAAGCCTGGAGAAGCTGGGGAGATGCGGTTCACAATGCCT *АААААААААААААААААААААААААААААА*

MNPLFGPNLFLLQQEQQGLAGPLGDSLGGDHFAGGGDLPPAPLSPAGPAAYSPPGPGPAPPAAMALRNDLGSNIN VLKTLNLRFRCFLAKVHELERRNRLLEKQLQQALEEGKQGRRGLGRRDQAVQTGFVSPIRPLGLQLGARPAAVCS PSARVLGSPARSPAGPLAPSAASLSSSSTSTSTTYSSSARFMPGTIWSFSHARRLGPGLEPTLVQGPGLSWVHPD GVGVQIDTITPEIRALYNVLAKVKRERDEYKRRCFYRVK

GGTTGAGCACAGGGTACTTTATTGATGGTACATGACAAGGTGCGGCTCCCTAGGCCCCTCCCCTCTTCAAGGGGT CTACATGGCAACTGTGAGGAGGGGAGATTCAGTGTGGGGGGGACTGAGTGTGGCAGGGACTCCCCAGCAGTGAG GGTCTCTCTCTCTTGTGCTCTGGGGGCTGGTGGTCCAGGGGTCTTACTCCTTGGAGGCCATGTGGGCC ATGAGGTCCACCCCTGTTGCTGTAGCCAAATTCGTTGTCATACCAGGAAATGAGCTTGACAAAGTGGTCGTTG AGGGCAATGCCAGCCCCAGCGTCAAAGGTGGAGGAGTGGGTGTCGCTGTTGAAGTCAGAGGAGACCACCTGGTGC TCAGTGTAGCCCAGGATGCCCTTGAGGGGGCCCTCCGACGCCTGCTTCACCACCTTCTTGATGTCATCATATTTG GCAGGTTTTTCTAGACGGCAGGTCAGGTCCACCACTGACACGTTGGCAGTGGGGACACGGAAGGCCATGCCAGTG AGCTTCCCGTTCAGCTCAGGGATGACCTTGCCCACAGCCTTGGCAGCGCCAGTAGAGGCAGGGATGATGTTCTGG AGAGCCCCGCGGCCATCACGCCACAGTTTCCCGGAGGGGCCATCCACAGTCTTCTGGGTGGCAGTGATGGCATGG ACTGTGGTCATGAGTCCTTCCACGATACCAAAGTTGTCATGGATGACCTTGGCCAGGGGTGCTAAGCAGTTGGTG GTGCAGGAGGCATTGCTGATGATCTTGAGGCTGTTGTCATACTTCTCATGGTTCACACCCATGACGAACATGGGG GCATCAGCAGAGGGGGCAGAGATGATGACCCTTTTGGCTCCCCCTGCAAATGAACCCCAGCCTTCTCCATGGTG GTGAAGACGCCAGTGGACTCCACGACGTACTCAGCGCCAGCATCGCCCCACTTGATTTTGGAGGGATCTCACTCC TGGAAGATGGTGATGGGATTTCCATTGATGACAAGCTTCCCGTTCTCAGCCTTGACGGTGCCATGGAATTTGCCA TGGGTGGAATCATATTGGAACATGTAAACCATGTAGTTGAGGTCAATGAAGGGGTCATTGATGGCAACAATATCC ACTTTACCAGAGTTAAAAGCAGCCCTGGTGACCAGGCGCCCAATACGACCAAATCCGTTGACTCCGACCTTCACC TTCCCCATGGTGTCTGAGCGATGTGGCTCGGCTGGCGACAAAAGAAGATGCGGCTGACTGTCGAAC

CTCTCTGCTCCTGTTCGACAGTCAGCCGCATCTTCTTTTGCGTCGCCAGCCGAGCCACATCGCTCAGACACC <u>ATG</u>GGGAAGGTGAAGGTCGGAGTCAACGGATTTGGTCGTATTGGGCGCCCTGGTCACCAGGGCTGCTTTTAACTCT GGTAAAGTGGATATTGTTGCCATCAATGACCCCTTCATTGACCTCAACTACATGGTTTACATGTTCCAATATGAT TCCACCCATGGCAAATTCCATGGCACCGTCAAGGCTGAGAACGGGAAGCTTGTCATCAATGGAAATCCCATCACC ATCTTCCAGGAGCGAGATCCCTCCAAAATCAAGTGGGGCGATGCTGGCGCTGAGTACGTCGTGGAGTCCACTGGC GTCTTCACCACCATGGAGAAGGCTGGGGCTCATTTGCAGGGGGGAGCCAAAAGGGTCATCATCTCTGCCCCCTCT GCTGATGCCCCCATGTTCGTCATGGGTGTGAACCATGAGAAGTATGACAACAGCCTCAAGATCATCAGCAATGCC TCCTGCACCAACTGCTTAGCACCCCTGGCCAAGGTCATCCATGACAACTTTGGTATCGTGGAAGGACTCATG ACCACAGTCCATGCCATCACTGCCACCCAGAAGACTGTGGATGGCCCCTCCGGGAAACTGTGGCGTGATGGCCGC GGGGCTCTCCAGAACATCATCCCTGCCTCTACTGGCGCTGCCAAGGCTGTGGGCAAGGTCATCCCTGAGCTGAAC ${\tt GGGAAGCTCACTGGCATGGCCTTCCGTGTCCCCACTGCCAACGTGTCAGTGGTGGACCTGACCTGCCGTCTAGAA}$ AAACCTGCCAAATATGATGACATCAAGAAGGTGGTGAAGCAGGCGTCGGAGGGCCCCCTCAAGGGCATCCTGGGC TACACTGAGCACCAGGTGGTCTCCTCTGACTTCAACAGCGACACCCACTCCTCCACCTTTGACGCTGGGGCTGGC ATTGCCCTCAACGACCACTTTGTCAAGCTCATTTCCTGGTATGACAACGAATTTGGCTACAGCAACAGGGTGGTG GACCTCATGGCCCACATGGCCTCCAAGGAGTAAGACCCCTGGACCACCAGCCCCAGCAAGAGCACAAGAGGAAGA GAGAGACCCTCACTGCTGGGGAGTCCCTGCCACACTCAGTCCCCCACCACACTGAATCTCCCCTCCTCACAGTTG CCATGTAGACCCCTTGAAGAGGGGGGGCCTAGGGAGCCGCACCTTGTCATGTACCATCAATAAAGTACCCTGT GCTCAACC

MGKVKVGVNGFGRIGRLVTRAAFNSGKVDIVAINDPFIDLNYMVYMFQYDSTHGKFHGTVKAENGKLVINGNPIT IFQERDPSKIKWGDAGAEYVVESTGVFTTMEKAGAHLQGGAKRVIISAPSADAPMFVMGVNHEKYDNSLKIISNA SCTTNCLAPLAKVIHDNFGIVEGLMTTVHAITATQKTVDGPSGKLWRDGRGALQNIIPASTGAAKAVGKVIPELN GKLTGMAFRVPTANVSVVDLTCRLEKPAKYDDIKKVVKQASEGPLKGILGYTEHQVVSSDFNSDTHSSTFDAGAG IALNDHFVKLISWYDNEFGYSNRVVDLMAHMASKE

3767/6881 FIGURE 3475A

AAGTTTTGGAGCGCCGGACAAGCTGAGGTCCGCGACTCGTCGCTAAGATTCCCCAAAACTGAGATTTCAAGAAAA TTCACCCTTTCCGCTTTCTTTGGCGTCCTTCAACCGTGAAGGAAATGAAGGTTGAGAACCTGGAACCCGCTTCCA ATGACCAAGCCCTTTCTCTGTGCCTCACAACAGTCTTCCGCTGTAGCTGTTTTTATTACCCCCTATTTTACTACTG GGGAGGAGTTTGAGGTCCTGAAAGTGAAGTGACTTGCTGGACGTCACTTAGCAGAGGAGATGGCGAAACCTGGA CGCGACGTCTCTGGCCAGCAGAAATACGGCCTCCTCCCCGCCGACTGGGCAAAGGGGGGACCTTGCGGCCAAGGAG TTGGCCGGCCGCTCCGGCGGCGTCGCGATTGGCCGTCCTGCAGCCGTTGAGATTTGAACTCGGTATTTGTGGCT TTGAAAACTGCCTTGCTAATTGGTGCGTGTTTGTGCACGCGTGTTTTTTCCTTTTCATTTCAGCCTGACTGCCGGA ATCAGAGCCGCGGTGAGATCCCCAGCCCTGTGAGCCTGTAGGAGTAGAATGGCTCCCCAAATGTATGAGTTCCA ${\tt TCTGCCATTATCCCCAGAGGAGTTGTTGAAAAGTGGAGGGGTGAATCAGTATGTTGTGCAAGAGGTACTGTCCAT}$ CAAACATCTTCCACCACAGCTTAGAGCTTTTCAGGCTGCCTTTCGAGCTCAGGGGCCCCTGGCTATGCTGCAGCA CTTTGATACTATCTACAGCATTTTGCATCACTTTCGAAGTATAGATCCTGGCCTCAAAGAAGATACTCTGCAATT CCTGATAAAAGTGGTATCCCGCCACTCCCAGGAGCTTCCAGCTATCCTGGATGATACAACTTTGAGTGGATCAGA TAGAAACGCCCATCTAAATGCCCTCAAAATGAACTGTTATGCTCTGATACGTCTCCTGGAATCCTTTGAGACCAT GGCCAGCCAGACAAACCTTGTGGACCTTGGTGGGAAGGGTAAGAAAGCTCGGACCAAGGCAGCCCATGG CTTTGACTGGGAAGAGAGGGCAACCAATTCTTCAGCTTTTAACACAGCTACTTCAGTTGGACATCCGTCACCT GTGGAACCACTCAATAATTGAAGAAGAATTTGTCAGTTTGGTTACTGGCTGTTGCTACCGCCTTCTGGAGAATCC CACCATTAATCACCAGAAGAACCGCCCCACTCGGGAAGCCATAACACACCTGCTTGGTGTAGCCTTGACCCGTTA TAACCATATGCTCAGTGCTACAGTGAAGATCATCCAGATGCTGCAGCACTTTGAACACCTGGCACCTGTACTGGT TGCAGCCGTGAGTCTATGGGCAACTGACTATGGAATGAAGAGCATAGTGGGAGAGATTGTAAGAGAGATTGGACA AAAGTGTCCCCAAGAGCTGAGTCGAGACCCTTCAGGGACAAAGGGCTTTGCAGCATTCCTGACAGAACTAGCAGA TAATGCTGTGCTGCCAGCCATGGCGGAGATGGTGCTGCAGGTTCTCAGTGGCGATCAACTGGAAGCAGCAGCCCG AGACACCAGAGACCAGTTCTTGGATACTTTACAAGCCCATGGCCATGATGTCAACTCCTTTGTGCGGAGCCGTGT TTTGCAGCTCTTCACCCGAATTGTCCAGCAGAAGGCTCTCCCCCTGACACGTTTCCAGGCAGTGGTGGCTTTAGC TGTGGGACGTCTGGCAGACAAGTCAGTGCTAGTATGTAAAAATGCCATCCAGCTGCTGGCCAGTTTTCTAGCCAA TAATCCTTTCTCCTGCAAGCTTAGTGATGCTGACCTTGCCGGACCACTGCAGAAGGAGACCCAGAAATTACAAGA GATGAGGGCCCAGAGGCGAACTGCAGCAGCTTCTGCAGTGCTGGACCCAGAGGAGGAGTGGGAAGCCATGCTGCC AGAGTTGAAGTCTACCCTGCAGCAGCTTCTACAGCTTCCCCAGGGAGAGGAGGAGATTCCTGAGCAAATTGCCAA TACAGAGACAACTGAAGATGTGAAAGGACGCATCTATCAACTGCTTGCCAAAGCTAGTTACAAAAAAGGCCATCAT TCTCACTCGAGAAGCCACAGGCCACTTCCAGGAGTCCGAACCCTTCAGTCATATAGACCCAGAGGAGTCAGAGGA GACCAGGCTCTTGAATATCTTAGGACTTATCTTCAAAGGCCCAGCAGCATCACACAAGAAAAGAATCCCCGGGA GTCTACAGGAAACATGGTCACAGGACAGACTGTCTGTAAAAATAAACCCAATATGTCGGATCCTGAGGAATCCAG GGGAAATGATGAACTAGTGAAGCAGGAGATGCTGGTACAGTATCTGCAGGATGCCTACAGCTTCTCCCGGAAGAT TACAGAGGCCATTGGCATCATCAGCAAGATGATGTATGAAAACACAACTACAGTGGTGCAGGAGGTGATTGAATT CTTTGTGATGGTCTTCCAATTTGGGGTACCCCAGGCCCTGTTTGGGGTGCGCCGTATGCTGCTCTCATCTGGTC TAAGGAGCCTGGTGTCCGGGAAGCCGTGCTTAATGCCTACCGCCAACTCTACCTCAACCCCAAAGGGGACTCTGC TCTTGAGGAAATTCTCTGTGAGTTTGTGCAGAAGGATGAGTTGAAACCAGCAGTGACCCAGCTGCTGTGGGAGCG GGCCACCGAGAAGGTCGCCTGCTGTCCTCTGGAGCGCTGTTCCTCTGTCATGCTTCTTGGCATGATGGCACGAGG AAAGCCAGAAATTGTGGGAAGCAATTTAGACACACTGGTGAGCATAGGGCTGGATGAGAAGTTTCCACAGGACTA CAGGCTGGCCCAGCAGGTGTGCCATGCCATTGCCAACATCTCGGACAGGAGAAAGCCTTCTCTGGGCAAACGTCA $\verb|CCCCCCTTCCGGCTGCCTCAGGAACACAGGTTGTTTGAGCGACTGCGGGAGACAGTCACAAAAGGCTTTGTCCA|\\$ $\verb|CCCAGACCCACTCTGGATCCCATTCAAAGAGGTGGCAGTGACCCTCATTTACCAACTGGCAGAGGGCCCCGAAGT|\\$ GATCTGTGCCCAGATATTGCAGGGCTGTGCAAAACAGGCCCTGGAGAAGCTAGAAGAGAAGAGAACCAGTCAGGA

3768/6881 FIGURE 3475B

GGAGCACAAGACCAAAGATCCCAAGGAGAAGAATACGAGCTCTGAGACCACCATGGAGGAGGAGCTGGGGCTGGT TGGGGCAACAGCAGATGACACAGAGGCAGAACTAATCCGTGGCATCTGCGAGATGGAACTGTTGGATGGCAAACA GACACTGGCTGCCTTTGTTCCACTCTTGCTTAAAGTCTGTAACAACCCAGGCCTCTATAGCAACCCAGACCTCTC TGCAGCTGCTTCACTTGCCCTTGGCAAGTTCTGCATGATCAGTGCCACTTTCTGCGACTCCCAGCTTCGTCTTCT GTTCACCATGCTGGAAAAGTCTCCACTTCCCATTGTCCGGTCTAACCTCATGGTTGCCACTGGGGATCTGGCCAT CCGCTTTCCCAATCTGGTGGACCCCTGGACTCCTCATCTGTATGCTCGTCTCCGGGACCCTGCTCAGCAAGTGCG GAAAACAGCGGGGCTGGTGATGACCCACCTGATCCTCAAGGACATGGTGAAGGTGAAGGGCCAGGTCAGCGAGAT GGCGGTGCTCATCGACCCCGAGCCTCAGATTGCTGCCCTGGCCAAGAACTTCTTCAATGAGCTCTCCCACAA GGGCAACGCAATCTATAATCTCCTTCCAGATATCATCAGCCGCCTGTCAGACCCCGAGCTGGGGGTGGAGGAAGA GCTGTGTCAGCGGTTCCGCACATCCCGAACTGAGCGGCAGCGAGACCTGGCCTACTGTGTGTCACAGCTGCC CCTCACAGAGCGAGGCCTCCGTAAGATGCTTGACAATTTTGACTGTTTTGGAGACAAACTGTCAGATGAGTCCAT CTTCAGTGCTTTTTTGTCAGTTGTAGGCAAGCTGCGACGTGGGGCCAAGCCTGAGGGCAAGGCTATAATAGATGA TAGCCAGAGAGCGCCATCAGCCAAGAAACCATCCACTGGTTCTAGGTACCAGCCTCTGGCTTCTACAGCCTCAGA CAATGACTTTGTCACACCAGAGCCCCGCCGTACTACCCGTCGGCATCCAAACACCCCAGCAGCGGGCTTCCAAAAA GAAACCCAAAGTTGTCTTCTCAAGTGATGAGTCCAGTGAGGAAGATCTTTCAGCAGAGATGACAGAAGACGAGAC TTTTAAAAAAAAAAAGGCCGGGCACTGTGGCTCACGCCTGTAATCCCAGCACTTTGCGATACCAAGGCGGGTGG AGCCGGGCGTATTGGCGTGCGCCTGTAATCCCAGCTACTCAAGAGGCTGAGGCAGGAGAATCGCCTGAACCCAGA GGCGGAGGTTGTAGTGAGCCGAAATCACACCATTGCACTCCAGCTTGGGCAACAATAGCGAACCTCCATCTCAAA TTAAAAAAAAATGCCTACACGCTCTTTAAAATGCAAGGCTTTCTCTTAAATTAGCCTAACTGAACTGCGTTGAG CTGCTTCAACTTTGGAATATATGTTTGCCAATCTCCTTGTTTTCTAATGAATAAATGTTTTTATATACTTTT

GCCCTGGAGGCCCGGCCTCCCGGCCCTGGGGTGCACATCGGCCCTGAGTCCCGTCCCAGGCTCTGGGC TCGGGCAGCCGCCACCGCTGCCCAGGACGTCGGGCCTCCTGCCTTCCTCCCAGGCCCCCACGTTGCTGGCCG $\tt CCTGGCCGAGTGGCCGCCATCCTTCGCCTTGGGCCACCTCTGCCCCGGCCTGGCGCGGGGCCTCTGGTGCTG$ GGCCTCTTCGGGCTCCTGGCAGCATCGCAGCCCCAGGCGGTGCCTCCATATGCGTCGGAGAACCAGACCTGCAGG GACCAGGAAAAGGAATACTATGAGCCCCAGCACCGCATCTGCTGCTCCCGCTGCCCCCAGGCACCTATGTCTCA GCTAAATGTAGCCGCATCCGGGACACAGTTTGTGCCACATGTGCCGAGAATTCCTACAACGAGCACTGGAACTAC CTGACCATCTGCCAGCTGTGCCGCCCCTGTGACCCAGTGATGGGCCTCGAGGAGATTGCCCCCTGCACAAGCAAA CGGAAGACCCAGTGCCGCCAGCCGGGAATGTTCTGTGCTGCCTGGGCCCTCGAGTGTACACACTGCGAGCTA CTTTCTGACTGCCCGCCTGGCACTGAAGCCGAGCTCAAAGATGAAGTTGGGAAGGGTAACAACCACTGCGTCCCC TGCAAGGCAGGCACTTCCAGAATACCTCCTCCCCCAGCGCCCGCTGCCAGCCCCACACCAGGTGTGAGAACCAA GGTCTGGTGGAGGCAGCTCCAGGCACTGCCCAGTCCGACACACCTGCAAAAATCCATTAGAGCCACTGCCCCCA TCCTGCATCTGGAAGAGCCACCCTTCTCTCTGCAGGAAACTGGGATCGCTGCTCAAGAGGCGTCCGCAGGGAGAG CTACCCATTTCTGGAGATGTTTCCCCAGTATCCACTGGGCTCCCCGCAGCCCCAGTTTTGGAGGCAGGGGTGCCG CAACAGCAGAGTCCTCTGGACCTGACCAGGGAGCCGCAGTTGGAACCCGGGGAGCAGAGCCAGGTGGCCCACGGT ACCAATGGCATTCATGTCACCGGCGGGTCTATGACTATCACTGGCAACATCTACATCTACAATGGACCAGTACTG GGGGGACCACCGGGTCCTGGAGACCTCCCAGCTACCCCCGAACCTCCATACCCCATTCCCGAAGAGGGGGACCCT GGCCCTCCCGGGCTCTCTACACCCCACCAGGAAGATGGCAAGGCTTGGCACCTAGCGGAGACAGAGCACTGTGGT AGGGGGGCACAAGGGCACTTTCTCCCTTGAGGCTGCCCTGCCCACGTGGGATTCACAGGGGCCTGAGTAGGGCCC GCCTCAGGCACGGACAGGGCACATGATACCAACTGCTGCCCACTACGGCACGCCACCGGAGCACGGCACCGAG GGAGCCGCCACACGGTCACCTGCAAGGACGTCACGGGCCCCTCTAAAGGATTCGTGGTGCTCATCCCCAAGCTTC AGAGACCCTTTGGGGTTCCACACTTCACGTGGACTGAGGTAGACCCTGCATGAAGATGAAATTATAGGGAGGACG CTCCTTCCCTCCCTAGAGGAGAGGAAAGGGAGTCATTAACAACTAGGGGGTTGGGTAGGATTCCTAGGTAT GGGGAAGAGTTTTGGAAGGGGAGGAAAATGGCAAGTGTATTTATATTGTAACCACATGCAAATAAAAAGAATGGG ACCTAAACTCGTGCCGCTCGTGCCGAATTCCTGCAG

MLLPWATSAPGLAWGPLVLGLFGLLAASQPQAVPPYASENQTCRDQEKEYYEPQHRICCSRCPPGTYVSAKCSRI RDTVCATCAENSYNEHWNYLTICQLCRPCDPVMGLEEIAPCTSKRKTQCRCQPGMFCAAWALECTHCELLSDCPP GTEAELKDEVGKGNNHCVPCKAGHFQNTSSPSARCQPHTRCENQGLVEAAPGTAQSDTTCKNPLEPLPPEMSGTM LMLAVLLPLAFFLLLATVFSCIWKSHPSLCRKLGSLLKRRPQGEGPNPVAGSWEPPKAHPYFPDLVQPLLPISGD VSPVSTGLPAAPVLEAGVPQQQSPLDLTREPQLEPGEQSQVAHGTNGIHVTGGSMTITGNIYIYNGPVLGGPPGP GDLPATPEPPYPIPEEGDPGPPGLSTPHQEDGKAWHLAETEHCGATPSNRGPRNQFITHD

WO 2004/030615 PCT/US2003/028547

3771/6881 FIGURE 3478

CCGGCCAGCGGGGGGCTCCCCAGCCAGGCCGCTGCACCTGTCAGGGGAACAAGCTGGAGGAGCAGGACCCTAGA $\tt CCTCTGCAGCCCATACCAGGTCTC{\color{red} \underline{\textbf{ATC}}} GAGGGGGAACAAGCTGGAGGAGCAGGACTCTAGCCCTCCACAGTCCACT$ CCAGGGCTCATGAAGGGGAACAAGCGTGAGGAGCAGGGGCTGGGCCCCGAACCTGCGGCGCCCCAGCAGCCCACG GCGGAGGAGGAGGCCCTGATCGAGTTCCACCGCTCCTACCGAGAGCTCTTCGAGTTCTTCTGCAACAACACCACC ATCCACGGCGCCATCCGCCTGGTGTGCTCCCAGCACAACCGCATGAAGACGGCCTTCTGGGCAGTGCTGTGGCTC TGCACCTTTGGCATGATGTACTGGCAATTCGGCCTGCTTTTCGGAGAGTACTTCAGCTACCCCGTCAGCCTCAAC ATCAACCTCAACTCGGACAAGCTCGTCTTCCCCGCAGTGACCATCTGCACCCTCAATCCCTACAGGTACCCGGAA ATTAAAGAGGAGCTGGAGGAGCCGCATCACAGAGCAGACGCTCTTTGACCTGTACAAATACAGCTCCTTC ACCACTCTCGTGGCCGGCTCCCGCAGCCGTCGCGACCTGCGGGGGACTCTGCCGCACCCCTTGCAGCGCCTGAGG GTCCCGCCCCGCCTCACGGGGCCCGTCGAGCCCGTAGCGTGGCCTCCAGCTTGCGGGACAACAACCCCCAGGTG GACTGGAAGGACTGGAAGATCGGCTTCCAGCTGTGCAACCAGAACAAATCGGACTGCTTCTACCAGACATACTCA TCAGGGGTGGATGCGGTGAGGGAGTGGTACCGCTTCCACTACATCAACATCCTGTCGAGGCTGCCAGAGACTCTG CCATCCCTGGAGGAGGACACGCTGGGCAACTTCATCTTCGCCTGCCGCTTCAACCAGGTCTCCTGCAACCAGGCG AATTACTCTCACTTCCACCACCCGATGTATGGAAACTGCTATACTTTCAATGACAAGAACAACTCCAACCTCTGG ATGTCTTCCATGCCTGGAATCAACAACGGTCTGTCCCTGATGCTGCGCGCAGAGCAGAATGACTTCATTCCCCTG CTGTCCACAGTGACTGGGGCCCGGGTAATGGTGCACGGGCAGGATGAACCTGCCTTTATGGATGATGGTGGCTTT GACTGCACCAAGAATGGCAGTGATGTTCCTGTTGAGAACCTTTACCCTTCAAAGTACACACAGCAGGTGTGTATT ${\tt CACTCCTGCTTCCAGGAGAGCATGATCAAGGAGTGTGGCTGTGCCTACATCTTCTATCCGCGGCCCCAGAACGTG}$ GAGTACTGTGACTACAGAAAGCACAGTTCCTGGGGGTACTGCTACTATAAGCTCCAGGTTGACTTCTCCTCAGAC CACCTGGGCTGTTTCACCAAGTGCCGGAAGCCATGCAGCTGACCAGCTACCAGCTCTCTGCTGGTTACTCACGA TGGCCCTCGGTGACATCCCAGGAATGGGTCTTCCAGATGCTATCGCGACAGAACAATTACACCGTCAACAACAAC AGAAATGGAGTGGCCAAAGTCAACATCTTCTTCAAGGAGCTGAACTACAAAACCAATTCTGAGTCTCCCTCTGTC ACGATGGTCACCCTCCTGTCCAACCTGGGCAGCCAGTGGAGCCTGTGGTTCGGCTCCTCGGTGTTGTCTGTGGTG GAGATGGCTGAGCTCGTCTTTGACCTGCTGGTCATCATGTTCCTCATGCTGCTCCGAAGGTTCCGAAGCCGATAC TGGTCTCCAGGCCGAGGGGGCAGGGGTGCTCAGGAGGTAGCCTCCACCCTGGCATCCTCCCCTCCTTCCCACTTC TGCCCCCACCCCATGTCTCTTGTCCCAGCCAGCCCTGCTCCCTCTCCAGCCTTGACAGCCCCTCCCCCT GCCTATGCCACCCTGGGCCCCCGCCCATCTCCAGGGGGCCTCTGCAGGGGCCAGTTCCTCCACCTGTCCTCTGGGG ${\tt GGGCCC}{\tt \underline{TGA}}{\tt GAGGGAAGGAGGTTTCTCACACCAAGGCAGATGCTCCTCTGGTGGGAGGGTGCTGGCCCTGGCA$ AGATTGAAGGATGTGCAGGGCTTCCTCTCAGAGCCGCCCAAACTGCCGTTGATGTGTGGAGGGGAAGCAAGATGG GTAAGGGCTCAGGAAGTTGCTCCAAGAACAGTAGCTGATGAAGCTGCCCAGAAGTGCCTTGGCTCCAGCCCTGTA CCTCTAGCCTCATACCCGTGCCCTCACAGAGCCATGCCCCGGCACCTCTGCCCTGTGTCTTTCATACCTCTACAT GTCTGCTTGAGATATTTCCTCAGCCTGAAAGTTTCCCCAACCATCTGCCAGAGAACTCCTATGCATCCCTTAGAA CCCTGCTCAGACACCATTACTTTTGTGAACGCTTCTGCCACATCTTGTCTTCCCCAAAATTGATCACTCCGCCTT $\tt CTCCTGGGCTCCCGTAGCACACTATAACATCTGCTGGAGTGTTGCTGTTGCACCATACTTTCTTGTACATTTGTG$

MEGNKLEEQDSSPPQSTPGLMKGNKREEQGLGPEPAAPQQPTAEEEALIEFHRSYRELFEFFCNNTTIHGAIRLV CSQHNRMKTAFWAVLWLCTFGMMYWQFGLLFGEYFSYPVSLNINLNSDKLVFPAVTICTLNPYRYPEIKEELEEL DRITEQTLFDLYKYSSFTTLVAGSRSRRDLRGTLPHPLQRLRVPPPPHGARRARSVASSLRDNNPQVDWKDWKIG FQLCNQNKSDCFYQTYSSGVDAVREWYRFHYINILSRLPETLPSLEEDTLGNFIFACRFNQVSCNQANYSHFHHP MYGNCYTFNDKNNSNLWMSSMPGINNGLSLMLRAEQNDFIPLLSTVTGARVMVHGQDEPAFMDDGGFNLRPGVET SISMRKETLDRLGGDYGDCTKNGSDVPVENLYPSKYTQQVCIHSCFQESMIKECGCAYIFYPRPQNVEYCDYRKH SSWGYCYYKLQVDFSSDHLGCFTKCRKPCSVTSYQLSAGYSRWPSVTSQEWVFQMLSRQNNYTVNNKRNGVAKVN IFFKELNYKTNSESPSVTMVTLLSNLGSQWSLWFGSSVLSVVEMAELVFDLLVIMFLMLLRRFRSRYWSPGRGGR GAQEVASTLASSPPSHFCPHPMSLSLSQPGPAPSPALTAPPPAYATLGPRPSPGGSAGASSSTCPLGGP

CGGCCCAGTGATCTTGAACCCCAAAGGCCAGAACTGGAGCCTCAGTCCAGAGAATTCTGAGAAAATTAAAGCAGA GAGGAGGGGAGATCACTGGGACCAGGCCGTGATCTCTATGCCCGAGTCTCAACCCTCAACTGTCACCCCAAGG CACTTGGGACGTCCTGGACAGACCGAGTCCCGGGAAGCCCCAGCACTGCCGCTGCCACACTGCCCTGAGCCCAAA ${\tt TGGGGGAGTGAGAGGCCATAGCTGTCTGGC} \underline{{\tt ATG}} {\tt GGCCTCTCCACCGTGCCTGACCTGCTGCCGCTGGTGCTC}$ CTGGAGCTGTTGGTGGGAATATACCCCTCAGGGGTTATTGGACTGGTCCCTCACCTAGGGGACAGGGAGAAGAGA GATAGTGTGTGTCCCCAAGGAAAATATATCCACCCTCAAAATAATTCGATTTGCTGTACCAAGTGCCACAAAGGA ACCTACTTGTACAATGACTGTCCAGGCCCGGGGCAGGATACGGACTGCAGGGAGTGTGAGAGCGGCTCCTTCACC GCTTCAGAAAACCACCTCAGACACTGCCTCAGCTGCTCCAAATGCCGAAAGGAAATGGGTCAGGTGGAGATCTCT TCTTGCACAGTGGACCGGGACACCGTGTGTGGCTGCAGGAAGAACCAGTACCGGCATTATTGGAGTGAAAACCTT TTCCAGTGCTTCAATTGCAGCCTCTGCCTCAATGGGACCGTGCACCTCTCCTGCCAGGAGAAACAGAACACCGTG TGCACCTGCCATGCAGGTTTCTTTCTAAGAGAAAACGAGTGTGTCTCCTGTAGTAACTGTAAGAAAAGCCTGGAG TGCACGAAGTTGTGCCTACCCCAGATTGAGAATGTTAAGGGCACTGAGGACTCAGGCACCACAGTGCTGTTGCCC CTGGTCATTTTCTTTGGTCTTTGCCTTTTATCCCTCCTCTTCATTGGTTTAATGTATCGCTACCAACGGTGGAAG TCCAAGCTCTACTCCATTGTTTGTGGGAAATCGACACCTGAAAAAGGGGGGGAGCTTGAAGGAACTACTACTAAG TCCACCTTCACCTCCAGCTCCACCTATACCCCCGGTGACTGTCCCAACTTTGCGGCTCCCCGCAGAGAGGTGGCA CCACCCTATCAGGGGGCTGACCCCATCCTTGCGACAGCCCTCGCCTCCGACCCCATCCCCAACCCCCTTCAGAAG ${\tt TGGGAGGACAGCGCCCACAAGCCACAGAGCCTAGACACTGATGACCCCGCGACGCTGTACGCCGTGGTGGAGAAC}$ CAGAACGGGCGCTGCCTGCGCGAGGCGCAATACAGCATGCTGGCGACCTGGAGGCGGCGCACGCCGCGGCGCGAG GCCACGCTGGAGCTGCTGGGACGCGTGCTCCGCGACATGGACCTGCTGGGGCTGCCTGGAGGACATCGAGGAGGCG GACCGTCCTGCGAGATCGCCTTCCAACCCCACTTTTTTCTGGAAAGGAGGGGTCCTGCAGGGGCAAGCAGGAGCT TGCCTCATGCCCGTTTTGGGTGTCCTCACCAGCAAGGCTGCTCGGGGGCCCCTGGTTCGTCCCTGAGCCTTTTTC AACTTGGCACTCCTGTGCCCTGGCCTGGACAAGCACATAGCAAGCTGAACTGTCCTAAGGCAGGGGGCGAGCACG

MGLSTVPDLLLPLVLLELLVGIYPSGVIGLVPHLGDREKRDSVCPQGKYIHPQNNSICCTKCHKGTYLYNDCPGP GQDTDCRECESGSFTASENHLRHCLSCSKCRKEMGQVEISSCTVDRDTVCGCRKNQYRHYWSENLFQCFNCSLCL NGTVHLSCQEKQNTVCTCHAGFFLRENECVSCSNCKKSLECTKLCLPQIENVKGTEDSGTTVLLPLVIFFGLCLL SLLFIGLMYRYQRWKSKLYSIVCGKSTPEKEGELEGTTTKPLAPNPSFSPTPGFTPTLGFSPVPSSTFTSSSTYT PGDCPNFAAPRREVAPPYQGADPILATALASDPIPNPLQKWEDSAHKPQSLDTDDPATLYAVVENVPPLRWKEFV RRLGLSDHEIDRLELQNGRCLREAQYSMLATWRRRTPRREATLELLGRVLRDMDLLGCLEDIEEALCGPAALPPA PSLLR

3775/6881 FIGURE 3482A

AATGGTACCGTGACACAGGGGGACCAAAGAGTCTCCATGCCCTATGCCTCCAAAGGGCTGTATCTAGAAACTGAG GCTGGGTACTACAAGCTGTCCGGTGAGGCCTATGGCTTTGTGGCCAGGATCGATGGCAGCGGCAACTTTCAAGTC $\tt CTGCTGTCAGACAGATACTTCAACAAGACCTGCGGGCTGTGTGGCAACTTTAACATCTTTGCTGAAGATGACTTT$ ATGACCCAAGAAGGGACCTTGACCTCGGACCCTTATGACTTTGCCAACTCATGGGCTCTGAGCAGTGGAGAACAG TGGTGTGAACGGGCATCTCCTCCCAGCAGCTCATGCAACATCTCCTCTGGGGAAATGCAGAAGGGCCTGTGGGAG CAGTGCCAGCTTCTGAAGAGCACCTCGGTGTTTGCCCGCTGCCACCCTCTGGTGGACCCCGAGCCTTTTGTGGCC CTGTGTGAGAAGACTTTGTGTGAGTGTGCTGGGGGGGCTGGAGTGCGCCTGCCCTGCCCTCCTGGAGTACGCCCGG ATGGAGTATAGGCAGTGTGTCCCCTTGCGCCAGGACCTGCCAGAGCCTGCACATCAATGAAATGTGTCAGGAG ${\tt CGATGCGTGGATGGCTGCCTGAGGGACAGCTCCTGGATGAAGGCCTCTGCGTGGAGAGCACCGAGTGT}$ AACAGCCAGTGGATCTGCAGCAATGAAGAATGTCCAGGGGGAGTGCCTTGTCACAGGTCAATCACACTTCAAGAGC TTTGACAACAGATACTTCACCTTCAGTGGGATCTGCCAGTACCTGCTGGCCCGGGATTGCCAGGACCACTCCTTC TCCATTGTCATTGAGACTGTCCAGTGTGCTGATGACCGCGACGCTGTGTGCACCCGCTCCGTCACCGTCCGGCTG CCCCTCCTGAAAGGTGACCTCCGCATCCAGCATACAGTGACGGCCTCCGTGCGCCTCAGCTACGGGGAGGACCTG TGTGGGAATTACAATGGCAACCAGGGCGACGACTTCCTTACCCCCTCTGGGCTGGCGGAGCCCCGGGTGGAGGAC TTCGGGAACGCCTGGAAGCTGCACGGGACTGCCAGGACCTGCAGAAGCAGCACAGCGATCCCTGCGCCCTCAAC ${\tt CCGCGCATGACCAGGTTCTCCGAGGAGGCGTGCGCGGTCCTGACGTCCCCACATTCGAGGCCTGCCATCGTGCCCCCACATTCGAGGCCTGCCATCGTGCCCCACATTCGAGGCCTGCCATCGTGCCCACATTCGAGGCCTGCCATCGTGCCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCATCGTGCCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCGAGGCCTGCCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACATTCACA$ GTCAGCCCGCTGCCCTACCTGCGGAACTGCCGCTACGACGTGTCCTCCTGCTCGGACGGCCGCGAGTGCCTGTGC GGCGCCCTGGCCAGCTATGCCGCGGCCTGCGCGGGAGAGGCGTGCGCGTCGCGTGGCGCGAGCCAGGCCGCTGT TACCCGGATGAGGAATGCAATGAGGCCTGCCTGGAGGGCTGCTTCTGCCCCCCAGGGCTCTACATGGATGAGAGG GACCATCACACCATGTGCTACTGTGAGGATGGCTTCATGCACTGTACCATGAGTGGAGTCCCCGGAAGCTTGCTG CCTGACGCTGTCCTCAGCAGTCCCCTGTCTCATCGCAGCAAAAGGAGCCTATCCTGTCGGCCCCCATGGTCAAG TGCATGAGCATGGGCTGTGTCTCTGGCTGCCTCTGCCCCCGGGCATGGTCCGGCATGAGAACAGATGTGTGGCC CTGGAAAGGTGTCCCTGCTTCCATCAGGGCAAGGAGTATGCCCCTGGAGAAACAGTGAAGATTGGCTGCAACACT CACTACCTCACCTTCGACGGGCTCAAATACCTGTTCCCCGGGGAGTGCCAGTACGTTCTGGTGCAGGATTACTGC GGCAGTAACCCTGGGACCTTTCGGATCCTAGTGGGGAATAAGGGATGCAGCCACCCCTCAGTGAAATGCAAGAAA GATGAGACTCACTTTGAGGTGGTGGAGTCTGGCCGGTACATCATTCTGCTGCTGGGCAAAGCCCTCTCCGTGGTC TGGGACCGCCACCTGAGCATCTCCGTGGTCCTGAAGCAGACATACCAGGAGAAAGTGTGTGGCCTGTGTGGGAAT TTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAAC TCCTGGAAAGTGAGCTCGCAGTGTGCTGACACCAGAAAAGTGCCTCTGGACTCATCCCCTGCCACCTGCCATAAC AACATCATGAAGCAGACGATGGTGGATTCCTCCTGTAGAATCCTTACCAGTGACGTCTTCCAGGACTGCAACAAG CTGGTGGACCCCGAGCCATATCTGGATGTCTGCATTTACGACACCTGCTCCTGTGAGTCCATTGGGGACTGCGCC TGCTTCTGCGACACCATTGCTGCCTATGCCCACGTGTGTGCCCAGCATGGCAAGGTGGTGACCTGGAGGACGGCC ACATTGTGCCCCCAGAGCTGCGAGGAGGAATCTCCGGGAGAACGGGTATGAGTGTGAGTGGCGCTATAACAGC TGTGCACCTGCCTGTCAAGTCACGTGTCAGCACCCTGAGCCACTGGCCTGCCCTGTGCAGTGTGGAGGGCTGC CATGCCCACTGCCTCCAGGGAAAATCCTGGATGAGCTTTTGCAGACCTGCGTTGACCCTGAAGACTGTCCAGTG TGTGAGGTGGCCGGCGTTTTGCCTCAGGAAAGAAGTCACCTTGAATCCCAGTGACCCTGAGCACTGCCAG ATTTGCCACTGTGATGTTGTCAACCTCACCTGTGAAGCCTGCCAGGAGCCGGGAGGCCTGGTGGTGCCTCCCACA GATGCCCCGGTGAGCCCCACCACTCTGTATGTGGAGGACATCTCGGAACCGCCGTTGCACGATTTCTACTGCAGC

3776/6881 FIGURE 3482B

AGGCTACTGGACCTGGTCTTCCTGCTGGATGGCTCCTCCAGGCTGTCCGAGGCTGAGTTTGAAGTGCTGAAGGCC TTTGTGGTGGACATGATGGAGCGGCTGCGCATCTCCCAGAAGTGGGTCCGCGTGGCCGTGGTGGAGTACCACGAC TATGCGGGCAGCCAGGTGGCCTCCACCAGCGAGGTCTTGAAATACACACTGTTCCAAATCTTCAGCAAGATCGAC CGCTACGTCCAGGGCCTGAAGAAGAAGAAGGTCATTGTGATCCCGGTGGGCATTGGGCCCCATGCCAACCTCAAG CAAAGGGACGAGATCGTTAGCTACCTCTGTGACCTTGCCCCTGAAGCCCCTCCTCCTACTCTGCCCCCCGACATG GTGGCGTTCGTCCTGGAAGGATCGGACAAAATTGGTGAAGCCGACTTCAACAGGAGCAAGGAGTTCATGGAGGAG GTGATTCAGCGGATGGATGTGGGCCAGGACAGCATCCACGTCACGGTGCTGCAGTACTCCTACATGGTGACTGTG GAGTACCCCTTCAGCGAGGCACAGTCCAAAGGGGACATCCTGCAGCGGGTGCGAGAGATCCGCTACCAGGGCGGC AACAGGACCAACACTGGGCTGGCCCTGCGGTACCTCTCTGACCACAGCTTCTTGGTCAGCCAGGGTGACCGGGAG CAGGCGCCCAACCTGGTCTACATGGTCACCGGAAATCCTGCCTCTGATGAGATCAAGAGGCTGCCTGGAGACATC ATCCTCATCCAGGACTTTGAGACGCTCCCCGAGAGGCTCCTGACCTGGTGCTGCAGAGGTGCTGCTCCGGAGAG TCCTCCAGTTTCCCAGCTTCTTATTTTGATGAAATGAAGAGTTTCGCCAAGGCTTTCATTTCAAAAGCCAATATA GGGCCTCGTCTCACTCAGGTGTCAGTGCTGCAGTATGGAAGCATCACCACCATTGACGTGCCATGGAACGTGGTC TTGGGCTTTGCTGTGCGATACTTGACTTCAGAAATGCATGGTGCCAGGCCGGGAGCCTCAAAGGCGGTGGTCATC CTGGTCACGGACGTCTCTGTGGATTCAGTGGATGCAGCAGCTGATGCCGCCAGGTCCAACAGAGTGACAGTGTTC CCTATTGGAATTGGAGATCGCTACGATGCAGCCCAGCTACGGATCTTGGCAGGCCCAGCAGCGACTCCAACGTG GGATTTGTTAGGATTTGCATGGATGAGGATGGGAATGAGAAGAGGCCCGGGGACGTCTGGACCTTGCCAGACCAG TGCCACACCGTGACTTGCCAGCCAGATGGCCAGACCTTGCTGAAGAGTCATCGGGTCAACTGTGACCGGGGGGCTG AGGCCTTCGTGCCCTAACAGCCAGTCCCCTGTTAAAGTGGAAGAGCCTGTGGCTGCCGCTGGACCTGCCCCTGT GTGTGCACAGGCAGCTCCACTCGGCACATCGTGACCTTTGATGGGCAGAATTTCAAGCTGACTGGCAGCTGTTCT TATGTCCTATTTCAAAACAAGGAGCAGGACCTGGAGGTGATTCTCCATAATGGTGCCTGCAGCCCTGGAGCAAGG CAGGGCTGCATGAAATCCATCGAGGTGAAGCACAGTGCCCTCTCCGTCGAGCTGCACAGTGACATGGAGGTGACG GTGAATGGGAGACTGGTCTCTGTTCCTTACGTGGGTGGGAACATGGAAGTCAACGTTTATGGTGCCATCATGCAT GAGGTCAGATTCAATCACCTTGGTCACATCTTCACATTCACTCCACAAAACAATGAGTTCCAACTGCAGCTCAGC CCCAAGACTTTTGCTTCAAAGACGTATGGTCTGTGTGGGATCTGTGATGAGAACGGAGCCAATGACTTCATGCTG AGGGATGGCACAGTCACCACAGACTGGAAAACACTTGTTCAGGAATGGACTGTGCAGCGGCCAGGGCAGACGTGC CAGCCCATCCTGGAGGAGCAGTGTCTTGTCCCCGACAGCTCCCACTGCCAGGTCCTCCTCTTACCACTGTTTGCT GAATGCCACAAGGTCCTGGCTCCAGCCACATTCTATGCCATCTGCCAGCAGGACAGTTGCCACCAGGAGCAAGTG TGTGAGGTGATCGCCTCTTATGCCCACCTCTGTCGGACCAACGGGGTCTGCGTTGACTGGAGGACACCTGATTTC TGTGCTATGTCATGCCCACCATCTCTGGTCTACAACCACTGTGAGCATGGCTGTCCCCGGCACTGTGATGGCAAC GTGAGCTCCTGTGGGGACCATCCCTCCGAAGGCTGTTTCTGCCCTCCAGATAAAGTCATGTTGGAAGGCAGCTGT GTCCCTGAAGAGGCCTGCACTCAGTGCATTGGTGAGGATGGAGTCCAGCACCAGTTCCTGGAAGCCTGGGTCCCG GACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGGGGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACG GCCAAAGCTCCCACGTGTGGCCTGTGTGAAGTAGCCCGCCTCCGCCAGAATGCAGACCAGTGCTGCCCCGAGTAT GAGTGTGTGTGACCCAGTGACCTGCCCCCAGTGCCTCACTGTGAACGTGGCCTCCAGCCCACACTG TCCTGCCCCCGCACCGTTTGCCCACCCTTCGGAAGACCCAGTGCTGTGATGAGTATGAGTGTGCCTGCAACTGT GTCAACTCCACAGTGAGCTGTCCCCTTGGGTACTTGGCCTCAACCGCCACCAATGACTGTGGCTGTACCACAACC ACCTGCCTTCCCGACAAGGTGTGTCCCACCGAAGCACCATCTACCCTGTGGGCCAGTTCTGGGAGGAGGGCTGC GATGTGTGCACCTGCACCGACATGGAGGATGCCGTGATGGGCCTCCGCGTGGCCCAGAGGCCCTGT

3777/6881 FIGURE 3482C

TGTGAGGTGGTGACTGGCTCACCGCGGGGGGACTCCCAGTCTTCCTGGAAGAGTGTCGGCTCCCAGTGGGCCTCC ${\tt CCGGAGAACCCCTGCCTCATCAATGAGTGTGTCCGAGTGAAGGAGGAGGTCTTTATACAACAAAGGAACGTCTCCC}$ TGCCCCCAGCTGGAGGTCCCTGTCTGCCCCTCGGGCTTTCAGCTGAGCTGTAAGACCTCAGCGTGCTGAGCC TGTCGCTGTGAGCGCATGGAGGCCTGCATGCTCAATGGCACTGTCATTGGGCCCGGGAAGACTGTGATGATCGAT GTGTGCACGACCTGCCGCTGCATGGTGCAGGTGGGGGTCATCTCTGGATTCAAGCTGGAGTGCAGGAAGACCACC TGCAACCCCTGCCCCCTGGGTTACAAGGAAGAAAATAACACAGGTGAATGTTGTGGGAGATGTTTGCCTACGGCT TGCACCATTCAGCTAAGAGGAGGACAGATCATGACACTGAAGCGTGATGAGACGCTCCAGGATGGCTGTGATACT CACAAGTGTCTGGCTGAGGGAGGTAAAATTATGAAAATTCCAGGCACCTGCTGTGACACATGTGAGGAGCCTGAG TGCAACGACATCACTGCCAGGCTGCAGTATGTCAAGGTGGGAAGCTGTAAGTCTGAAGTAGAGGTGGATATCCAC TACTGCCAGGGCAAATGTGCCAGCAAAGCCATGTACTCCATTGACATCAACGATGTGCAGGACCAGTGCTCCTGC TGCTCTCCGACACGGACGGAGCCCATGCAGGTGGCCCTGCACTGCACCAATGGCTCTGTTGTGTACCATGAGGTT CTCAATGCCATGGAGTGCAAATGCTCCCCCAGGAAGTGCAGCAAGTGAGGCTGCTGCAGCTGCATGGGTGCCTGC TGCTGCCTGGCCTGATGGCCAGGCCAGAGTGCTGCCAGTCCTCTGCATGTTCTGCTCTTGTGCCCTTCTG AGCCCACAATAAAGGCTGAGCTCTTATCTTGC

3778/6881 FIGURE 3483A

TCAGTGGCGTTTGCCCTGATTCCCGGGGCCTGGCTTTCAGCGTAGCAATTCTGCCGGCGAAGAAGGTGAGCGCAG TGCTGTGTGGCAGCAGAGGTCCTTAGGACGAGGAACAGCGGGACGAGGAAGGGCAGACTGGTGAAATCGCAAACT GGGCGTCTGTTCCGGCACCGGACCCCTGTTTGCAAAGGTCCATGCCTAATGAAACACAGAAGGTTGGTGCCATCC ATTTTCCTTTTCCCTTCACACCCTATTCCATCCAGGAAGACTTCATGGCAGAGCTGTACCGGGTTTTGGAGGCTG GCAAGATTGGGATATTTGAGAGTCCAACTGGCACTGGGAAGTCCTTAAGTCTTATTTGTGGGGCCCTCTCCTGGC TCCGTGACTTTGAACAGAAGAAGCGTGAAGAAGAGGCACGACTCCTTGAAACTGGAACTGGCCCCTTACATGATG AGAAAGATGAATCCCTGTGTCTTCTTCCTCCTGCGAAGGGGCTGCAGGCACCCCGAGGCCTGCTGGAGAACCGG CCTGGGTTACTCAGTTTGTGCAGAAGAAGAAGAGAGGGGACCTGGTGGACCGACTGAAGGTGGAGCAGGCCAGGA GGAAGCAGCGAGAAGAACGCCTGCAGCAGCTGCAGCACAGGGTGCAGCTCAAGTATGCAGCCAAGCGCCTGAGGC AGGAAGAAGAAGAACAGAGAATCTCCTCCGCCTCAGCAGGGAGATGCTAGAGACAGGCCCGGAGGCCGAGCGGC TGGAGCAGCTGGAGTCTGGGGAGGAGGAGGAGCTGGTCCTCGCCGAATACGAGAGTGATGAGGAGAAAAAAGGTGGCGA GCAGAGTGGATGAGGATGAGCTGGAGGAAGAACACATAACTAAGATTTATCACTGTAGTCGGACACACT CCCAGCTGGCCCAGTTTGTGCATGAGGTGAAGAAGAGCCCCTTTGGCAAGGATGTTCGGCTGGTCTCCCTCGGCT CCCGGCAGAACCTTTGTGTAAATGAAGACGTGAGAAGCCTAGGTTCTGTGCAGCTTATCAACGACCGCTGCGTGG ACATGCAGAGAAGCAGGCACGAGAAGAAGAAGGAGCTGAGGAGGAGGAGCCAAAGAGGAGGAGGAGAAGC AGGCAGCCTGCCCCTTCTACAACCACGAGCAGATGGGCCCTTCTCCGGGGATGAGGCCCTGGCAGAGGTGAAGGACA TGGAGCAGCTGCCGTTGGGAAGGAGGCCCGGGCCTGTCCCTATTACAGGAGCCGCCTTGCCATCCCTGCAG ${\tt CCCAGCTGGTGCTGCCCTATCAGATGCTGCTGCATGCGGCCACTCGGCAGGCCGGCATCCGGCTGCAGGCCAGGCCAGGCCGGCATCCGGCTGCAGGCCAGGCCAGGCCGGCATCCGGCTGCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCAGGCCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCA$ ACCAGGTGGTGATCATCGACGAGGCGCACAACCTGATCGACACCATCACGGGCATGCACAGCGTGGAGGTCAGCG GCTCCCAGCTCTGCCAGGCCCATTCCCAGCTGCTGCAGTACATGGAGCGATACGGGAAGCGTTTGAAGGCCAAGA ACCTGATGTACCTGAAGCAGATCCTGTATTTGCTGGAGAAATTCGTGGCTGTGCTAGGGGGGGAACATTAAGCAAA ATCCCAATACACAGAGTCTGTCACAGACAGGGACGGAGCTGAAGACCATCAACGACTTTCTCTTCCAGAGCCAGA TCGACAACATCAACCTGTTCAAGGTGCAGCGATACTGTGAGAAGAGCATGATCAGCAGAAAGCTCTTTGGCTTCA TGCAGCCCAGGACGACTGAAGCTCTTGCAGCCCCTGCAGACGAGAGTCAGGCCAGCGTCCCGCAACCAGCTTCCC CACTAATGCACATCGAAGGCTTCCTGGCAGCTCTCACTACGGCCAACCAGGACGGCAGGGTCATCCTGAGCCGCC AAGGCAGCCTCAGTGAGAGCACCCTGAAGTTTTTGCTCCTGAATCCAGCTGTGCACTTTGCCCCAAGTGGTGAAGG AATGCCGGGCAGTGGTCATTGCGGGGGGGACCATGCAGCCGGTGTCTGACTTCCGGCAGCAGCTGCTGGCCTGTG CTGGGGTGGAAGCTGAGCGCGTGGTGGAGTTTTCCTGTGGTCACGTGATCCCTCCAGACAACATCTGCCCCTTGT CATCTGCAGCGGGATCTCCAACCAGCCGCTGGAATTCACCTTCCAGAAAAGAGACCTGCCTCAGA<u>TGA</u>TATTCCA GGAACCTAAGAGCGCACACCAGGTGGAGCAGGTGCTGCTGGCGTATTCCAGGTGCATCCAGGCCTGTGGCCAGGA GAGAGGCCAGGTGACAGAGGCCCTGCTCCTCTGTGGTTGGAGGAAAGATGAGTGAAGGGATCAACTTCTCTGA CAACCTAGGCCGGTGTGTGGTGATGGTGGGCATGCCCTTCCCCAACATCAGGTCTGCAGAGCTGCAGGAGAAGAT GGCCTACTTGGATCAAACCCTCCCCAGAGCCCCCGGCCAGGCACCCCCAGGGAAGGCTCTGGTGGAGAACCTGTG CATGAAGGCCGTCAACCAGTCCATAGGCAGGGCCATCAGGCACCAGAAGGATTTTGCCAGCATAGTGCTCCTGGA CCAGCGATACGCCCGGCCCCTGTCCTGGCCAAGCTGCCGGCCTGGATCCGAGCCAGTGTGGAGGTCAAAGCTAC ACCGCCCGGCGCCGTGCCCTTCGTTGTCCTGCCCTCTGGAGACAGTGTTTGTCGTGGGCGTGGTCTGCAGGGAT CCTGTTACAAAGGTGAAACCCAGGAGGAGAGTGTGGAGTCCAGAGCGCTGCCGGGACCCAGGCACAGGCGTTAGC TCCCGTAGGAGAAAATGCGGGAATCCTGAATGAACAGTGGGTCCTGGCTGTCCTTGGGGCGGTTCCAGGGCAGCTC CCCTCCTGGAATAGAATCTTTCTTTCCATCCTGCATGGCTGAGAGCCAGGCTTCCTGCTTGGAGTCCGCAGGAGG CTGTGGCAGCAGTGGCATCCACTGTGGCATCTCCGTCCTGCCCACCTTAAGAGGCGAGATGGAGCAGGTCCATCT GCCTCTGCCCTTTCTAGCCAAGGTTATAGCTGCCCTGGACTGCTCACTCTCTGGTCTCAATTTAAAATGATCCCG CTGCTCTCTATCCTGCCCACAGCCCTGCCTGGATTTGTATCCTTGGCTTCGTGCCAGTTCCTCCAAGTCTATGG CACCTCCCTCCCTCTCAACCACTTGAGCAAACTCCAAGACACCTTCTACCCCGACACCAGCAATTATGCCAAGGG CCATTAGGCTCTCAACATGACTATAGAGACCCCGTATCATCATGGAGACCTTTGTTCCTGTGGGAAAATAACCCT CCCACCTGCAACAGCTGCCCCTGCTGACTGCGCCTGTCTTCTCCCTCTGACCCCAGAGAAAGGGGCCGTGGTCAG

3779/6881 FIGURE 3483B

MANETQKVGAIHFPFPFTPYSIQEDFMAELYRVLEAGKIGIFESPTGTGKSLSLICGALSWLRDFEQKKREEEAR LLETGTGPLHDEKDESLCLSSSCEGAAGTPRPAGEPAWVTQFVQKKEERDLVDRLKVEQARRKQREERLQQLQHR VQLKYAAKRLRQEEEETENLLRLSREMLETGPEAERLEQLESGEEELVLAEYESDEEKKVASRVDEDEDDLEEEH ITKIYHCSRTHSQLAQFVHEVKKSPFGKDVRLVSLGSRQNLCVNEDVRSLGSVQLINDRCVDMQRSRHEKKKGAE EEKPKRRQEKQAACPFYNHEQMGLLRDEALAEVKDMEQLLALGKEARACPYYRSRLAIPAAQLVVLPYQMLLHA ATRQAAGIRLQDQVVIIDEAHNLIDTITGMHSVEVSGSQLCQAHSQLLQYMERYGKRLKAKNLMYLKQILYLLEK FVAVLGGNIKQNPNTQSLSQTGTELKTINDFLFQSQIDNINLFKVQRYCEKSMISRKLFGFTERYGAVFSSREQP KLAGFQQFLQSLQPRTTEALAAPADESQASVPQPASPLMHIEGFLAALTTANQDGRVILSRQGSLSESTLKFLLL NPAVHFAQVVKECRAVVIAGGTMQPVSDFRQQLLACAGVEAERVVEFSCGHVIPPDNICPLSSAAGSPTSRWNSP SRKETCLR

WO 2004/030615 PCT/US2003/028547

3781/6881 FIGURE 3485A

TACAATACAGTCTGTTCTCCCAGCTCCTTCTTTCTGCAACATGGGGAAGAACAAACTCCTTCATCCAAGTCTG GTTCTTCTCCTCTTGGTCCTCCCCACAGACGCCTCAGTCTCTGGAAAACCGCAGTATATGGTTCTGGTCCCC TCCCTGCTCCACACTGAGACCACTGAGAAGGGCTGTGTCCTTCTGAGCTACCTGAATGAGACAGTGACTGTAAGT GCTTCCTTGGAGTCTGTCAGGGGAAACAGGAGCCTCTTCACTGACCTGGAGGCGGAGAATGACGTACTCCACTGT GTCGCCTTCGCTGTCCCAAAGTCTTCATCCAATGAGGAGGTAATGTTCCTCACTGTCCAAGTGAAAAGGACCAACC ATCTACAAACCAGGGCAGACAGTGAAATTTCGTGTTGTCTCCATGGATGAAAACTTTCACCCCCTGAATGAGTTG ATTCCACTAGTATACATTCAGGATCCCAAAGGAAATCGCATCGCACAATGGCAGAGTTTCCAGTTAGAGGGTGGC CTCAAGCAATTTTCTTTTCCCCTCTCATCAGAGCCCTTCCAGGGCTCCTACAAGGTGGTGGTACAGAAGAAATCA GGTGGAAGGACAGAGCACCCTTTCACCGTGGAGGAATTTGTTCTTCCCAAGTTTGAAGTACAAGTAACAGTGCCA AAGATAATCACCATCTTGGAAGAAGAGATGAATGTATCAGTGTGTGGCCTATACACATATGGGAAGCCTGTCCCT GGACATGTGACTGTGAGCATTTGCAGAAAGTATAGTGACGCTTCCGACTGCCACGGTGAAGATTCACAGGCTTTC TGTGAGAAATTCAGTGGACAGCTAAACAGCCATGGCTGCTTCTATCAGCAAGTAAAAACCAAGGTCTTCCAGCTG AAGAGGAAGGAGTATGAAATGAAACTTCACACTGAGGCCCAGATCCAAGAAGAAGAACAGTGGTGGAATTGACT GGAAGGCAGTCCAGTGAAATCACAAGAACCATAACCAAACTCTCATTTGTGAAAGTGGACTCACACTTTCGACAG GGAATTCCCTTCTTTGGGCAGGTGCGCCTAGTAGATGGGAAAGGCGTCCCTATACCAAATAAAGTCATATTCATC AGAGGAAATGAAGCAAACTATTACTCCAATGCTACCACGGATGAGCATGGCCTTGTACAGTTCTCTATCAACACC ACCAATGTTATGGGTACCTCTTTACTGTTAGGGTCAATTACAAGGATCGTAGTCCCTGTTACGGCTACCAGTGG GAGCCCATGTCTCATGAACTACCCTGTGGCCATACTCAGACAGTCCAGGCACATTATATTCTGAATGGAGGCACC CTGCTGGGGCTGAAGAAGCTCTCCTTCTATTATCTGATAATGGCAAAGGGAGGCATTGTCCGAACTGGGACTCAT GGACTGCTTGTGAAGCAGGAAGACATGAAGGGCCATTTTTCCATCTCAATCCCTGTGAAGTCAGACATTGCTCCT GTCGCTCGGTTGCTCATCTATGCTGTTTTACCTACCGGGGACGTGATTGGGGATTCTGCAAAATATGATGTTGAA AATTGTCTGGCCAACAAGGTGGATTTGAGCTTCAGCCCATCACAAAGTCTCCCAGCCTCACACGCCCACCTGCGA GTCACAGCGGCTCCTCAGTCCGTCCGCCCCCCGTGCTGTGGACCAAAGCGTGCTGCTCATGAAGCCTGATGCT GAGCTCTCGGCGTCCTCGGTTTACAACCTGCTACCAGAAAAGGACCTCACTGGCTTCCCTGGGCCTTTGAATGAC CAGGACAATGAAGACTGCATCAATCGTCATAATGTCTATATTAATGGAATCACATATACTCCAGTATCAAGTACA AATGAAAAGGATATGTACAGCTTCCTAGAGGACATGGGCTTAAAGGCATTCACCAACTCAAAGATTCGTAAACCC AAAATGTGTCCACAGCTTCAACAGTATGAAATGCATGGACCTGAAGGTCTACGTGTAGGTTTTTATGAGTCAGAT GTAATGGGAAGAGGCCATGCACGCCTGGTGCATGTTGAAGAGCCTCACACGGAGACCGTACGAAAGTACTTCCCT GAGACATGGATCTGGGATTTGGTGGTGGTAAACTCAGCAGGTGTGGCTGAGGTAGGAGTAACAGTCCCTGACACC ATCACCGAGTGGAAGGCAGGGGCCTTCTGCCTGTCTGAAGATGCTGGACTTGGTATCTCTTCCACTGCCTCTCTC CGAGCCTTCCAGCCCTTCTTTGTGGAGCTCACAATGCCTTACTCTGTGATTCGTGGAGAGGCCTTCACACTCAAG GCCACGGTCCTAAACTACCTTCCCAAATGCATCCGGGTCAGTGTGCAGCTGGAAGCCTCTCCCGCCTTCCTAGCT GTCCCAGTGGAGAAGGAACAAGCGCCTCACTGCATCTGTGCAAACGGGCGGCAAACTGTGTCCTGGGCAGTAACC CCAAAGTCATTAGGAAATGTGAATTTCACTGTGAGCGCAGAGGCACTAGAGTCTCAAGAGCTGTGTGGGACTGAG AAGGAAACAACATTCAACTCCCTACTTTGTCCATCAGGTGGTGAGGTTTCTGAAGAATTATCCCTGAAACTGCCA CCAAATGTGGTAGAAGAATCTGCCCGAGCTTCTGTCTCAGTTTTGGGAGACATATTAGGCTCTGCCATGCAAAAC ACACAAAATCTTCTCCAGATGCCCTATGGCTGTGGAGAGCAGAATATGGTCCTCTTTGCTCCTAACATCTATGTA CTGGATTATCTAAATGAAACACAGCAGCTTACTCCAGAGATCAAGTCCAAGGCCATTGGCTATCTCAACACTGGT TACCAGAGACAGTTGAACTACAAACACTATGATGGCTCCTACAGCACCTTTGGGGAGCGATATGGCAGGAACCAG GGCAACACCTGGCTCACAGCCTTTGTTCTGAAGACTTTTGCCCAAGCTCGAGCCTACATCTTCATCGATGAAGCA CACATTACCCAAGCCCTCATATGGCTCTCCCAGAGGCAGAAGGACAATGGCTGTTTCAGGAGCTCTGGGTCACTG CTCAACAATGCCATAAAGGGAGGAGTAGAAGATGAAGTGACCCTCTCCGCCTATATCACCATCGCCCTTCTGGAG ATTCCTCTCACAGTCACCCCTGTTGTCCGCAATGCCCTGTTTTGCCTGGAGTCAGCCTGGAAGACAGCACAA GAAGGGGACCATGCATGTATATACCAAAGCACTGCTGGCCTATGCTTTTGCCCTGGCAGGTAACCAGGAC

PCT/US2003/028547

3782/6881 FIGURE 3485B

ATGGGAAGACAATGGATGACCTACCTGTGGAGAGAAACTACCCATTCCAGAACCTCCTCTCTGCTGAAAGCTGAA $\tt CGTTGGGACACCCTTGCTGGAAAGGACATCCTTACTGTGGAAATGAGCTACTAACTGCAGGAGCTGAGGAGCT$ GCACAGCAAGGTTAAAAGAGCTGTAACACAAACAGGGCTGCAACATGCCCCTTGCTCCCCACAGGGAGAGAAGAG CTCTGGCCCTCGGAGAAGCCCAGACCTGGGAGCTCCTTGAGCCCGGGCTGTGACTCCCTCTTTGGGGCCCTGGTT ${\tt GGCGTCACTGCATTCGCCAGTGCCACTGTTGGAAGCTGCTTGTG} \underline{{\tt ATG}} {\tt CGCCTGGTCCAGGGGGAAGCTGTTTGTT}$ GTGTGCCTGGTCCAGCCACCTCATGGAGAGCCTGTGCTGGCACCTGGAGCTGCCCAACCTGGGCAGCAGCTTGTG TGTGTGACTGCACAGTGGCCACGCTTGCTCACACACCCCTAGCACACCCCTCTGCTCCACCCGTCTCAATCTCCC TTGGATCCGGGATCCAGGTTGGTAGCAAGTGCGAGTGGGCAGAAGCAGCCCAGTGGGCCCAGAGCAAAACTCAGG ${\tt CAAAGGTGCCACTAGACTGGCCAGGAAAGCGACACCCTAAAGATCCCATAATGCTGATATGT}{\color{red}{\textbf{TAA}}}{\tt TTCTATTCTA}$ TAAGCACCACACAGAAGTGATAGCTTTTATTTCTTATTTTGTCTAGCCTGGAGACAGAGCTAAGGATTCCTTGAA TGCCAAATGAAGAGTAGGACTCCTACGATTGTCCTCAGACTCTCTTGGCTCAATCCTCCTGCTTTAACCTTTCCT CAATATAATACTCCTATTTGGACTTTGAGTCATACACATTCCTTCTTCTGAGAAAACGTGCTTCTGCATGAATCC GCAGATTTTGGTGTAACATAGGACACCACCCCCAATTCAGGTCAAGTCCCAATTATCTTGCCTCTCAATATGA TCTCATAAAAATTCACCCTTTGGGTTTTTCATAGGGTATTCCCATAACCAAACACACTTTACACTTTCCTAGTAC ATAACCCAATACTTTCTTCTTTCCCCACAGTCCTTACATGAAGCCTACTCAGACCGACATCACTGTATCATTTTT TTGTATTCTGAAGTCCTTCAGCACTTGATTCCTTTAAGTTTAATCTTGGTATTCTATTGGGAATCATATGGAAAT GTACAATGATATTTATTGAATGAACAGGAAACAGGGAAAGACATTGACCAGAAAAAGTGTTTATTCATCAAGTCT TTAAAGATACAAAAACACGTGTCTTCTGTGGAGCTCTGAGAACAGGACTCCAGCAAAGCACTTTTCAGCCTTGTG GAGTATTCTTTCCCTTAGTTCTGGGTAGCATAGTGCCCAAGGAAACCTAATCAGTACAGTGGGAAACCAAATCTA TTCCAAATCATTACCCATAAGCAATCCTATGGACTCTCTGAGGTTTGACAGAGTCAGCGGCCCTCTCCAATAAAT GTGTTTTTCTAT

 ${\tt MRLVQGEAVCCVPGPATSWRACAGTWSCPTWAAACVCDCTVATLAHTPLAHPSAPPVSISLGSGIQVGSKCEWAE} \\ {\tt AAQWAQSKTQAKVPLDWPGKRHPKDPIMLIC}$

ACTCGAACCCTACCCGGGAGCGGTCAGGCGCGTGACCCCGCGTGACCGGGGTGCGCGAGCCGAGAGGCCCTGGAA GCGGGACTCTGGGACCCCATTGAAAGAAAGGCAACCAGAAAAGGCGAAACGACAACCTCGATAGTGATTGGAGCT GATGGAACGAGGGCGGAGCTAAAGTCCCAGAATACTGGCCAATCAGAGTTTAAGATTATCAGGGAGCCCGGGAAG GGGAAAGGGGCGAAATGGTTCTATGGTCACATGCCGCGGGGTCTGGTGGGAGGAGCGGTTGCCCAGCGGCCTCTT GGCGCTTCCTGTTTCCGGTTCCCAGAGTGGGGCACAGCGAGGCGCTAGGGGGAACGCTGGCCTCTGAAACTAGCT CTGGGACCGGGGTCTGCGGCCGGCCCCTAGCTGGCCCCGTCTCCCCATCCCCAGAAGGGTATTCACTGGGGATTCT GAGCTTTGGCTACTCCAGTTTCCCACGACACGTGAGTGTGAGGGGGCGTGGAGGAGGAGGAGGCGGGTTGCGCT CACACTTAAGCGTCTGTGACAGGAGCCGGAATCGCATTCTCCCTTGACCATGGTTCTAGCCAAAGATCTGGCTGA GGAGCCCTAAGGGTAGAATGGAGGCGGAGGCATGAGAGCGGAGAGTCACGGAGTTCCGAAAGGTGTGAGGGAGAA AGGACTTCCAAGACCAGAGAGGGGATTTACGATATTTAGAAAGCAGGGAAAGGAAAATACCCCAAGTATGGAGTC CGTTGGAGGTGTTGGTGGATTTATTTGTAGGAGGAATTTTGGCCTGCATCACGGTGGGAGGTCAAGTGGCATCAT TTGGAGAGGGTATGGCTACAAGCGCTTGGAAAGTCGGGACACTAGACAGAGCGAGAATTTCTGGCACCCTGGGAG AGCTTTGAGGGGGATGCGACTGTGGTGTGGATAAGAATGGCTGATGGACGGATTATCTTGTGTTCCTCGTTGTGG GGAGCTTCCGCTCTTGGGACATAGCCGCTACTTGTCTGAGGCTCCTTCTCTCTTGAGTTCTTTCAGCATTAGGCC TTTTAGCCAATTGAGGCTGCTTTTCTAAACATGTAGGCTGCTGGAGAAAAAGGGATAAGGACTGCTACATCAGAA CTACAGAGGCCCAGTGGTGAAGCTGCTTCCCAGTTGCTGGCTTAGTCATTGGCCACCCTAATAAAGGATAATTT TTAGCATTGCCAAATAAAATAGATCTGTCGTTAGAGAATAAGAAAACTGAAAGATTTTTCAAGATCATAAAATCC TGCTCCTTATTTCCAAAGTATATAGACAAACTCTTGTACCTTGAGAATCTAATTGTAGCATATTAAAAGGGGGCT ACTGGGCCCTTCCATTTCATTCTCTTCCTGATTGTTGCACCCCTATGTTTATAAGTTTTCCAGCAGTTATCTTTA ACAAGTAATTCTGTAAAGCATCAGTTTTCTCATCTGTGAAGTATGAAAAATTATACCTATTTTCTGGGTTGTGAA GATGAATGAACATAATCTAGGGAAAACATTTAGCGCATATGCCACTGAATTAAAGAGAAGCAGCTTAAATTTAAA GACAAGCCTTAAGCAGGAAAGAAGAATACAGTATAAATTTATTATCCTAACTTTTTGAATAATAAGCAAATGAAA GATAGTTCAACTCAGCTAATGGCTGAGGTGTTTAACCTTTCATCCCTTCCTAATTTTGTGAGATTCCTTGTTCTA ATTTAGGAAAAGAAATCAACTGTCAGTTTTTAATTAGGTCCTGAGAGACTGGAAAGGAAAATGGCAGGCTAAGTC TTAGGGAAGGTGGGAGTTGGAGGTCTGAGTTCTTTATTTCACCTCCTATTCAGTCAACTGTGTGAGGAATCACTT CCCCTTCACTTCTTAGT

TTCCGGTTCCCAGAGTGGGGCACAGCGAGGCGCTAGGGGGAACGCTGGCCTCTGAAACTAGCTCTGGGACCGGGG TCTGCGGCCGGCCCCTAGCTGGCCCCGTCTCCCCATCCCCAGAAGGGTATTCACTGGGGATTCTGAGCTTTGGCTA CTCCAGTTTCCCACGACACGATGTTCCCTTTCTACAGCTGCTGGAGGACTGGACTGCTACTACTACTCCTGGCTG TGGCAGTGAGAGAATCCTGGCAGACAGAAAAAAAACTTGCGACTTGGTAGGAGAAAAGGGTAAAGAGTCAGAGA AAGAGTTGGCTCTAGTGAAGAGGCTGAAACCACTGTTTAATAAAAGCTTTGAGAGCACTGTGGGCCAGGGTTCAG ACACATACATCTACATCTTCAGGGTGTGCCGGGAAGCTGGCAACCACACTTCTGGGGCAGGCCTGGTGCAAATCA ACAAAAGTAATGGGAAGGAGACAGTGGTAGGGAGACTCAACGAGACTCACATCTTCAACGGAAGTAATTGGATCA TGCTGATCTATAAAGGGGGTGATGAATATGACAACCACTGTGGCAAGGAGCAGCGTCGTGCAGTGGTGATGATCT CCTGCAATCGACACCCTAGCGGACAATTTTAACCCTGTGTCTGAGGAGCGTGGCAAAGTCCAAGATTGTTTCT ACCTCTTTGAGATGGATAGCAGCCTGGCCTGTTCACCAGAGATCTCCCACCTCAGTGTGGGTTCCATCTTACTTG TCACGTTTGCATCACTGGTTGCTGTTTATGTTGTTGGGGGGGTTCCTATACCAGCGACTGGTAGTGGGAGCCAAAG GAATGGAGCAGTTTCCCCACTTAGCCTTCTGGCAGGATCTTGGCAACCTGGTAGCAGATGGCTGTGACTTTGTCT GCCGTTCTAAACCTCGAAATGTGCCTGCAGCATATCGTGGTGTGGGGGATGACCAGCTGGGGGAGGAGTCAGAAG ${\tt AAAGGGATGACCATTTATTACCAATG}$ GCTACACAGCCAGATTTCTCAAGCAGTCTCAACTCCAGTCCCTCATCTCACCCTTACTATTGCTCTTGCTTTCCA GTTTGCTTTTGATTTGCATCTTCTCACTAGTAAAACTGCCTTCCCTTTGTTCCTTATTTTCTGTTTTTTCTCTAG AGAGGTACAGTTGTAAGTCAGAGTTAATATAATAGGGCCTGTGAAAACAGAGGCTTTTGCATTGTCTCTTGACAT TTTCATGTTGTTATTCTGTACCCTATAGTAGCCTCCATGAGAATCTGGTATTTCTTGCTGCTTGGAACTACTTTG CAGTGATTACTTGGTTGCAGTCCAAGTACTCTCGTTTAGTCTGAGCCTGGAGATGTTCTAGACTTGCTTCCCA CCTCTGAGATTAGGACAGGAAAAATGTGAAATTTCCCAATTACAGGATTATACGGTACCATCACATCATTTGTGG AAATTGGGGTGACTGTATAGCTGGGATTGGGCTAAGGACTGTGGTCTTATCTGTCCACATACAGCCAAAATGCCT ATCCAGAAATCCAGTTCGTTGGAAAGGAAAATTGGTACTCCTGTGCCACAGGGGTTCCAGAAAAGGGAAGTCACT TTACCTTGCGGTGGTGGGATCCTGATGTCTTTCATCCATTTGTAGTAAAAGCTGGTAAAAGCTTTTCTTACTCCTG GTTCCCTACCAGTATTTCTAAACATGTCGCACTTTCTCCACAGGCATGTGGTTTTGACCTTTTTTCAATCTTCT AGAAAGGGAACGGAAGCAGAAGTGGGACATCGAGGGCTCTGCTGTCCTCTGCGCTGGGTGTGGAATGCTGCTGCA CCTGTCCCTTCTGCTGGCTCAGGGAAGTGTCTTCTTGCCCACATTTCTGTGGGGAAAGGTTTTTAATCCTCTGAT

MFPFYSCWRTGLLLLLLAVAVRESWQTEEKTCDLVGEKGKESEKELALVKRLKPLFNKSFESTVGQGSDTYIYIF
RVCREAGNHTSGAGLVQINKSNGKETVVGRLNETHIFNGSNWIMLIYKGGDEYDNHCGKEQRRAVVMISCNRHTL
ADNFNPVSEERGKVQDCFYLFEMDSSLACSPEISHLSVGSILLVTFASLVAVYVVGGFLYQRLVVGAKGMEQFPH
LAFWQDLGNLVADGCDFVCRSKPRNVPAAYRGVGDDQLGEESEERDDHLLPM

CTGAGCTGTCCCTGCAGGACTCCAGTGGAAGTGAAAGAACTGGGCACCGGGGAAAAGCTAGGATGTCCCACACTC CTACACCATGCAGGGAACTCGGGCACAGGCCGGCTGGGCCGGGATCAGATGGGAAGCAGAAGCTCATCATGACCA AACGGGATTGTAAGAATCAAGTCACTCTCATGGGAAGAATTTTTATATGGGAAAGCGGCTAAAACTTTCATTGGA CTGGAATGTTTGGAGATTGTTAAATTCCAAATCAGGAACCACAAACTGCCCTCTAATAAGATATCAGCTGTCTAA GCGTGTGGGTGCCGCCTTTCTGCCAGTAGTTCTGGTTCTTAAGAAAAGCACCATAAATCAGACATGAAAATTCTG GCTCCAAAAATAGCATTTTCTTTGTGCAAATAAAAACGTGTGTATCAAGTATGACGTTCCCCCAACGTGGACACA CTTGGTTCCTCAGAAAGCCAAGCCCGCTGCAGCTGCCACATCCCAGGGCTTATGGTGCAGCAGGTGCTTTTTTCA AGACAGGAATCAAAGTGTTAGGAACACGGCAGACAGGTGACACCTGGATACCAAATGCAGGATGAGGAGTACTGC AGAGGTCACAGGGAAGTCACAGAACAGTAATACGCTAGCAGGGGCATGGGGCGTGAAGAACAGAAGAAGAAGATT TGAGAAAAGCATCTGCAAAATGCTAAAGAGCAGAGCTTACCTCATTGCCTGTCCCCATCTCATCCCAGGTCACCA CCTGGCTGACCCCAGGTCCCCGACCCAACAACAACCCCTCCCAAGTCCCTAACTCCCTCACTTGGACTTGAGACC CTTCACAACCCAGCGCTCCGCCTCCAACGTGACATCATGCTTTCTGGAAACTTCCCCGTATGTCCCACTTTC CCACACTTGGTGCCCTGGAGCACCTTCCGGCCTCTACATGCTGTACGTTCCCCTGTGAGCACCCTCCTCTCGGCC GGAACAAAGCCACCCCTTAATCTACAGATGATCTGTGGCTACTTTCACACCACAACAGAGTACCATGGTTCTG ACAGAGACTGGGGGACCCTGTCTAAATGACTTCTGACCTGGACCTTTACTGAAAATCCTCCCAATCATTCTGTTG ACAAGAATGGTGTATTACTTTTTGCAATAAGAAACAAGTAACCTTTGCAGAATTCCACCCATCTTTCAAGGCTGA TCCCAGAAGTTCCCTCTGCCCACGCACCTACCTGATCCTGATCACTTCCTAAACTGCAGCCCGGCCCACCCGGCT CCAGCATCATTTGTGGAGTCTCAGCTCCATAAATCCAGAGGGCAGGTGGGGGGTGTGTCCTAATTTTCCCGAGCCT TGCATGCTCCCACCCTGGCTGTGTGAAGCAGGGATCAGGGAGCGTGGCTCGATGTCAGTCTCCAGAACCCTGTCC ACCCTGGCGTGGTGGCAGACATGGCTACCTGCAGCTGAGCTGCCAGTTCCTCTGAGTCCTCAAAGACCAGGCCAT TTTCTTTATGTTTCACCAGCTCATGTAAACTGCAGAGAGAACCAAGGGAGCCTGAGAGCTGCCTGGGGAAGACAC TTATTTTTGCATGTTTTTCTTAATTCCATGGCCATGGAACAAGTAAAGGCAACCCCCTGGGGACTGGTTCAGCAC ATAAAAGATGACTTTTCTAGGACACC

 ${\tt MVPPWLCEAGIRERGSMSVSRTLSTLAWWQTWLPAAELPVPLSPQRPGHFLYVSPAHVNCRENQGSLRAAWGRHQTPGVPSWAPTHPTLKPGWGLEQGVWFLGAGS}$

3790/6881 FIGURE 3493A

GTGGGGTGGGGTGGGGGCTTGTCGCCCTTTCAGGCTCCACCCTTTGCGGAGATTATAAATAGTCATGAT GAATTAGATTACAGCGATGGGGACACAGAAGGTCACCCCAGCTCTGATATTTGCCATCACAGTTGCTACAATCGG CTCTTTCCAATTTGGCTACAACACTGGGGTCATCAATGCTCCTGAGAAGATCATAAAGGAATTTATCAATAAAAC TTTGACGGACAAGGGAAATGCCCCACCCTCTGAGGTGCTGCTCACGTCTCTGTGTCCTTGTCTGTGGCCATATT TTCCGTCGGGGGTATGATCGGCTCCTTTTCCGTCGGACTCTTCGTCAACCGCTTTGGCAGGCGCAATTCAATGCT GATTGTCAACCTGTTGGCTGTCACTGGTGGCTGCTTTATGGGACTGTGTAAAGTAGCTAAGTCGGTTGAAATGCT GATCCTGGGTCGCTTGTTATTGGCCTCTTCTGCGGACTCTGCACAGGTTTTGTGCCCATGTACATTGGAGAGAT $\tt CTCGCCTACTGCCCTGCGGGGTGCCTTTGGCACTCTCAACCAGCTGGGCATCGTTGTTGGAATTCTGGTGGCCCA$ GAATGCTAAGCAGATCCTCCAGCGGTTGTGGGGCACCCAGGATGTATCCCAAGACATCCAGGAGATGAAAGATGA GAGTGCAAGGATGTCACAAGAAAAGCAAGTCACCGTGCTAGAGCTCTTTAGAGTGTCCAGCTACCGACAGCCCAT CATCATTTCCATTGTGCTCCAGCTCTCTCAGCAGCTCTCTGGGATCAATGCTGTGTTCTATTACTCAACAGGAAT . CTTCAAGGATGCAGGTGTTCAAGAGCCCATCTATGCCACCATCGGCGCGGGTGTGGTTAATACTATCTTCACTGT AGTTTCTCTATTTCTGGTGGAAAGGGCAGGAAGAAGGACTCTGCATATGATAGGCCTTGGAGGGATGGCTTTTTG TTCCACGCTCATGACTGTTTCTTTGTTATTAAAGGATAACTATAATGGGATGAGCTTTGTCTGTATTGGGGCTAT GGGCCCCGCCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACTGGACCTCCAACTTCCTAGTCGGATTGCTCTT $\tt CCCCTCCGCTGCTCACTATTTAGGAGCCTACGTTTTTATTATCTTCACCGGCTTCCTCATTACCTTCTTGGCTTT$ TGTCTAAGTCGTGCCTCCTTCCACCTCCCTCCCGGCATGGGAAAGCCACCTCTCCCTCAACAAGGGAGAGACCTC ATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCCACGCACTCCATGAGCACCC ACCGAGTGAACCTACCTTCATTTCAGGAGGGATTGGCCGCTTGGCACATGACAACTTTGCCAGCTTTTCCTCCCT TGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTTCCCCCAACCTCAGACTTAC CAGGAAGCAGATACATATGAGTGTGGAAGCCGGAGGGTGTTTATGTAAGAGCACCTTCCTCACTTCCATACAGCT ATAGAGTAGAAGATTTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAAATGTTGTTCATTATTGGA GGGTAAATGATGTGGTGCCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCCTTCAGATGGAAACTCTTTAA CTTCTCGTAAAAGTCATATACCTATATAAAAGCTACTGATTTCCTTTGGAGCTTTTTTCTTTAAGATAATAAGT TTACATGTAGTAGTACTTGAAATCTAGGATTATTAACTAATATGGGCATTGTAGTTAATGATGGTTGATGGGTTC TAATTTTGGATGGAGTCCAGGGAAGAAAGTGATTTCTAGAAAGCCTGTTCCCCTCACTGGATGAAATAACTCC TTCTTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAGCCATCCAAATAAGAAACC TAAAATAATTGGTTCTTGGTAGAGATTCATTATTTTTCCACTTTGTTCTTTAGGAGATTTTAGGTGTTGATTTTC TGTTGTATTTTAACTCATACCTTTAAAGGAATTCCCCAAAGAATGTTTATAGCAAACTTGGAATTTGTAACCTCA GCTCTGGGAGAGGATTTTTTCTGAGCGATTATTATCTAAAGTGTGTTGTTGCTTTAGGCTCACGGCACGCTTGC GTATGTCTGTTACCATGTCACTGTGGTCCTATGCCGAATGCCCTCAGGGGACTTGAATCTTTCCAATAAACCAGG TCTCCCTTTCCCTTCTTGGTGCTTACACATCTCAGACCCTTTAGCCAAACCCTTGTCAGTGACAGTATTTTGGTT CTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAATGCACGTAGCTGAGGCCGGATGCGGTGGC TCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGCGGTCAGGGGTTCGAGACCAGTCTGGCCAACATCG

3791/6881 FIGURE 3493B

PCT/US2003/028547

3792/6881 FIGURE 3494

GGCCAAGGCAAGATGGGTCAAAGTCAGAGTGGTGGTCATGGTCCTGGAGGTGGCAAGAAGGATGACAAGCTCTAA CAACTCAAGGACAAGAAAAAGAAATATGAACCTCCTGTACCAACTACAGTGGGGAAAAAGAAGAAGAAAACAAAG GGACCAGATGCTGCCAGCAAACTGCCACTGGTGACACCTCACACTCAGTGCCAGTTAAAATTACTGAAGTTAGAG AGAATTAAAGACTATCTTCTCATGGAGGAAGAATTCATTAGAAATCAGGAACAAATGAAACCATTAGAAGAAAAG CAAGAAGGGAAAAGATCAAAAGTGGATGATCTGAGGGGGGCCCCCAATGTCAGTAGGAATCTTGGAAGAGATCATT GATGACAATCATGCCATCGTGTCTACATCTGTGGGCTCAGAACACTACATCAGCATTCTTTCATTTGCAGACAAG ATGGATCCCCTGGTCACAGTGATGAAGGTGGAAAAGGCCCCCCAAGAGACCTATGCAGATACTGGGGGGTTGGAC AACCAAATTCGGGAAATTAAGGAATCTGTGGAGCTTCCTCTCACCCATCCTGAATATTATGAAGAGATGGGTATA AAGCCTCCAAGGGGGTCATTCTCTGTGGTCCACCTGGCACAGGTAAAACCTTGTTAGCCAAAGCAGTAGCAAACC AAACCTCAGCCACTTTCTTGAGAGTGGTTGGCTCTGAACTTATTCAGAAGTACCTAGGTGATGGGCCCAAACTCG GACGGGAATTGTTTCGAGTTGCTGAAGAACGTGCACCGTCCATTGTGTTTATTGATGAAATTGACGCCATTGGGA CAAAAAGATATGACTCCAATTCTGGTGGTGAGAGAGAAATTCAGCGAACAACGTTGGAACTGCTGAACCAGTTGG ATGGATTTGATTCTAGGGTAGATGTGAAAGCTATCATGGCCACAAACCAAATAGAAACTTTGGATCCAGCGCTTA TTCACACAAGCAGGATGACGCTGGCTGATGATGTAACCCTGCACGACTTGATCATGGCTAAAGATGACCTCTCTG GTGCTGACATCAAGGCAGTCTGTACAGAAGCTGGTCTGATGGCCTTAAGAGAACGTAGAATGAAAGTAACAAATG AAGACTTCAAAAAATCTAAAGAAAATGTTCTTTATAAGAAACAGGAAGACACCCCTGAGGGGGCTGTATCTCTAGT GAACTACGGCTGCCATCAGGAAAATGGTTGGGTGATTTCTCAGTCCCTGAAAGGGATGAGGCTGGGGGAGTTGCC CAGAGGAATCTCTGTTCCCATTGATTTTTATTAGCAAAACATCCTGTGTCTTTTGGAGTACGATGTGTAAGTGCC CACTGGGTGGCCTGTCTGTTGGTCACTGTGCAGCAGTCTGCTTCCCAATAAAGCGCGCTCTTTCACAA

TTAAACCAAAGGGACTTGGAGTGCAGATGGCATCCTTCGGTTCTTCCAGACAAGCTGCAAGACGCTGACCATGGC CAAG<u>ATG</u>GAGCTCTCGAAGGCCTTCTCTGGCCAGCGGACACTCCTATCTGCCATCCTCAGCATGCTATCACTCAG CTTCTCCACAACATCCCTGCTCAGCAACTACTGGTTTGTGGGCACACAGAAGGTGCCCAAGCCCCTGTGCGAGAA ACAATACAACTGGGAGACTGGGGATGACCGGTTCTCCTTCCGGAGCTTCCGGAGTGGCATGTGGCTATCCTGTGA GGAAACTGTGGAAGAACCAGGGGGAGAGGTGCCGAAGTTTCATTGAACTTACACCACCAGCCAAGAGAGGTGAGAA AGGACTACTGGAATTTGCCACGTTGCAAGGCCCATGTCACCCCACTCTCCGATTTGGAGGGAAGCGGTTGATGGA GAAGGCTTCCCTCCCTCCCTTGGGGCTTTGTGGCAAAAATCCTATGGTTATCCCTGGGAACGCAGATCA GGCTCAAACTGAGCGCCTTTGCTGCTGTTTCCTCTGTCCTGTCAGGTCTCCTGGGGATGGTGGCCCACATGATGT ATTCACAAGTCTTCCAAGCGACTGTCAACTTGGGTCCAGAAGACTGGAGACCACATGTTTGGAATTATGGCTGGG CCTTCTACATGGCCTGGCTCTCCTTCACCTGCTGCATGGCGTCGGCTGTCACCACCTTCAACACGTACACCAGGA ${\tt TGGTGCTGGAGTTCAAGTGCAAGCA} \underline{{\tt TAG}} {\tt TAAGAGCTTCAAGGAAAACCCGAACTGCCTACCACATCACCATCAGT}$ GTTTCCCTCGGCGGCTGTCAAGTGCAGCCCCCACCGTGGGTCCTTTGACCAGCTACCACCAGTATCATAATCAGC ${\tt CCATCCACTCTGTCTGAGGGAGTCGACTTCTACTCCGAGCTGCGGAACAAGGGATTTCAAAGAGGGGCCAGCC}$ AGGAGCTGAAAGAAGCAGTTAGGTCATCTGTAGAGGAAGAGCAGTGTTAGGAGTTAAGCGGGTTTGGGGAGTAGG

 ${\tt MELSKAFSGQRTLLSAILSMLSLSFSTTSLLSNYWFVGTQKVPKPLCEKGLAAKCFDMPVSLDGDTNTSTQEVVQ}$ YNWETGDDRFSFRSFRSGMWLSCEETVEEPGERCRSFIELTPPAKRGEKGLLEFATLQGPCHPTLRFGGKRLMEK ASLPSPPLGLCGKNPMVIPGNADHLHRTSIHQLPPATNRLATHWEPCLWAQTERLCCCFLCPVRSPGDGGPHDVFTSLPSDCQLGSRRLETTCLELWLGLLHGLALLHLHGVGCHHLQHVHQDGAGVQVQA}$

TCACCCCTCGCTCGTTCCCTCCGGCGAGGGCCGCCTTTATAACAACTGCTCAGAGTGCGAGGGCGGGATAG $\verb|CTGTCCAAGGTCTCCCCAGCACTGAGGAGCTCGCCTGCTGCCCTCTTGCGCGCGGGAAGCAGCACCAAGTTCAC| \\$ ${\tt GGCCAACGCCTTGGCACTAGGGTCCAGA}{\tt ATG}{\tt GCTACAACAGTCCCTGATGGTTGCCGCAATGGCCTGAAATCCAA}$ GTACTACAGACTTTGTGATAAGGCTGAAGCTTGGGGCCATCGTCCTAGAAACGGTGGCCACAGCCGGGGTTGTGAC CTCGGTGGCCTTCATGCTCACTCTCCCGATCCTCGTCTGCAAGGTGCAGGACTCCAACAGGCGAAAAATGCTGCC TACTCAGTTTCTCTTCCTCCTGGGTGTTTTGGGCATCTTTGGCCTCACCTTCGCCTTCATCATCGGACTGGACGG TGTCAGTCTGACCAAGCTCGTCCGGGGGAGGAAGCCCCTTTCCCTGTTGGTGATTCTGGGTCTGGCCGTGGGCTT CAGCCTAGTCCAGGATGTTATCGCTATTGAATATATTGTCCTGACCATGAATAGGACCAACGTCAATGTCTTTTC TGAGCTTTCCGCTCCTCGTCGCAATGAAGACTTTGTCCTCCTGCTCACCTACGTCCTCTTCTTGATGGCGCTGAC CTTCCTCATGTCCTCCTTCACCTTCTGTGGTTCCTTCACGGGCTGGAAGAGACATGGGGGCCCACATCTACCTCAC GATGCTCCTCTCCATTGCCATCTGGGTGGCCTGGATCACCCTGCTCATGCTTCCTGACTTTGACCGCAGGTGGGA TGACACCATCCTCAGCTCCGCCTTGGCTGCCAATGGCTGGGTGTTCCTGTTGGCTTATGTTAGTCCCGAGTTTTG GCTGCTCACAAAGCAACGAAACCCCATGGATTATCCTGTTGAGGATGCTTTCTGTAAACCTCAACTCGTGAAGAA GAGCTATGGTGTGGAGAACAGAGCCTACTCTCAAGAGGAAATCACTCAAGGTTTTGAAGAGACAGGGGACACGCT CTATGCCCCCTATTCCACACATTTTCAGCTGCAGAACCAGCCTCCCCAAAAGGAATTCTCCATCCCACGGGCCCA ${\tt CGCTTGGCCGAGCCCTTACAAAGACTATGAAGTAAAGAAGAGGGGCAGC{\tt TAACCTCTGTCCTGAAGAGTGGGACAA}}$ ATGCAGCCGGGCGGCAGATCTAGCGGGAGCTCAAAGGGATGTGGGCGAAATCTTGAGTCTTCTGAGAAAACTGTA CAAGACACTACGGGAACAGTTTGCCTCCCTCCCAGCCTCAACCACAATTCTTCCATGCTGGGGCTGATGTGGGCT CCAGGCTTGAGTGCAGTGCGATCACAGCCCAGTGCAGCCTCGACCACCTGTGCTCAAGCAATCCTCCCATCT CCATCTCCCAAAGTGCTGGGATGACAGGCGTGAGCCACAGCTCCCAGCCTAGGCCCTTAATCTTGCTGTTATTTT CCATGGACTAAAGGTCTGGTCATCTGAGCTCACGCTGGCTCACACAGCTCTAGGGGGCCTGCTCCTAACTCACA GTGGGTTTTGTGAGGCTCTGTGGCCCAGAGCAGACCTGCATATCTGAGCAAAAATAGCAAAAAGCCTCTCTCAGCC CACTGGCCTGAATCTACACTGGAAGCCAACTTGCTGGCACCCCCGCTCCCCAACCCTTCTTGCCTGGGTAGGAGA GGCTAAAGATCACCCTAAATTTACTCATCTCTCTAGTGCTGCCTCACATTGGGCCTCAGCAGCTCCCCAGCACCA ATTCACAGGTCACCCCTCTCTTCTTGCACTGTCCCCAAACTTGCTGTCAATTCCGAGATCTAATCTCCCCCTACG CTCTGCCAGGAATTCTTTCAGACCTCACTAGCACAAGCCCGGTTGCTCCTTGTCAGGAGAATTTGTAGATCATTC TCACTTCAAATTCCTGGGGCTGATACTTCTCTCATCTTGCACCCCAACCTCTGTAAATAGATTTACCGCATTTAC GGCTGCATTCTGTAAGTGGGCATGGTCTCCTAATGGAGGAGTGTTCATTGTATAATAAGTTATTCACCTGAGTAT

MATTVPDGCRNGLKSKYYRLCDKAEAWGIVLETVATAGVVTSVAFMLTLPILVCKVQDSNRRKMLPTQFLFLLGV LGIFGLTFAFIIGLDGSTGPTRFFLFGILFSICFSCLLAHAVSLTKLVRGRKPLSLLVILGLAVGFSLVQDVIAI EYIVLTMNRTNVNVFSELSAPRRNEDFVLLLTYVLFLMALTFLMSSFTFCGSFTGWKRHGAHIYLTMLLSIAIWV AWITLLMLPDFDRRWDDTILSSALAANGWVFLLAYVSPEFWLLTKQRNPMDYPVEDAFCKPQLVKKSYGVENRAY SQEEITQGFEETGDTLYAPYSTHFQLQNQPPQKEFSIPRAHAWPSPYKDYEVKKEGS WO 2004/030615 PCT/US2003/028547

3798/6881 FIGURE 3500

GGTACCTCGTGGAGAAGACGGGGGAGGGGAGCAGCAGATTTCCTTGCGGAGCAATATTCCTAGGGTACAGACCT ATCGGGGCACCGAGCTCGACCTTAGCTGGATCTCCAAAATACAAGTGAATCACCCGGCAGTTCTGAGGCGTGCGG AACAAATCCAGGCTCGCAGAACCGTGAAAAAGGAGTGGCAGGCTGCTTGGCTCCTGAAAGCTGTTACCTTTATAG ATCTTACTACACTTTCAGGTGATGATACATCTTCCAACATTCAAAGGCTCTGTTATAAAGCCAAATACCCAATCC GGGAAGATCTCTTAAAAGCTTTAAATATGCATGATAAAGGCATTACTACAGCCGCCGTTTGTGTTTATCCCGCCC ${\tt GGGTGTGATGCTGTAAAAGCACTCAAGGCTGCAGGCTGTAATATCCCTGTGGCATCAGTGGCCGCTGGATTTC}$ CAGCTGGACAGACTCATTTGAAGACACGATTAGAAGAGATCAGATTGGCTGTGGAAGATGGAGCTACAGAAATCG ACGTGGTAATTAACAGAAGCTTGGTGCTGACAGGCCAGTGGGAAGCCCTGTATGATGAGATTCGTCAGTTTCGCA AGGCCTGTGGGGAGGCTCATCTTAAAACTATATTAGCGACAGGAGAACTTGGAACTCTTACTAATGTCTATAAAG CCAGTATGATAGCAATGATGGCAGGATCAGATTTTATTAAGACCTCTACTGGAAAAGAAACAGTAAATGCCACCT TCCCGGTAGCTATAGTAATGCTGCGGGCCATTAGAGATTTCTTCTGGAAAACTGGAAACAAGATAGGGTTTAAAC GGCTGAAGCCAGAACTCTTTCGAATAGGTGCCAGTACTCTCGCTCTCGGACATTGAGAGGCAGATTTACCATCATG TGACTGGAAGATATCCAGCTTATCATGATCTTCCAATGTCTTAAATCAGTCACCAGTTCCAGAAAAGTTCTTTAC CATTCCTCTCTTTAAAATTTCTACCGAACTTAATGGAATGGAAAAAGCAAACTCATCCACATGTGGTACTCATTT CAGGCACATCTGAAATGATCTTAATTACTAGAAGATCTGCACTATTAACTTTGTGAAGAGTTTCTCCTAAAAACT CAGTGTGCCCTAGCAGAGGAAAATGCAACATCTCGCAAGCGCTGCTGTAACGACTTCAGGAGTCACTGATTCAGC ${\tt ACTAATTTCCTGCTGTGAAAACTCATCTTTCATTTTTTGCCGTGGATAGGCGCTTTTATTAATTGTTGTCCTAATG}$ AAATTTCTGACATTGTCATATACAACGATGAATATCATTAAAATTTTTAA

CCCTCCCTCGTCGACTGTTTCTTGCTGGTCGCAGACTCCCTGACCCCTCACCCCTCACCCTAACCTCGGTGCC CTGCAGCAGAAGAGAAAAGACAACGACGCCTCAGCTCGCCAGTCCGGTCGCTGGCTTCGCCGCCGCCGCCATCGC CTTATGGGTATTTCTTAATCAGCGCTTGCAAAGATGGTAAACCTATGCTACGCCAGGGAGATACAGGAGACTGGA TTGGAACATTTTTGGGTCATAAAGGTGCTGTTTGGGGTGCAACACTGAATAAGGATGCCACCAAAGCAGCTACAG CAGCTGCAGATTTCACAGCCAAAGTGTGGGATGCTGTCTCAGGAGATGAATTGATGACCCTGGCTCATAAACACA TTGTCAAGACTGTGGATTTCACGCAGGATAGTAATTATTTGTTAACCGGGGGACAGGATAAACTGTTACGCATAT GCAGTGAGGATAAACAGATTCTTTCTGCTGATGACAAAACTGTTCGACTTTGGGATCATGCTACTATGACAGAAG TGAAATCTCTAAATTTTAATATGTCTGTTAGTAGTATGGAATATATCCTGAGGGAGAGATTTTGGTTATAACTT ATGGACGATCTATTGCTTTTCATAGTGCAGTAAGTTTTGGACCCAATTAAATCCTTTGAAGCTCCTGCAACCATCA ATTCTGCATCTCTTCATCCTGAGAAAGAATTTCTTGTTGCAGGCGGTGAAGATTTTAAACTTTATAAGTATGATT ATAATAGTGGAGAAGTATTAGAATCCTACAAGGGACACTTTGGTCCTATTCACTGTGTGAGATTTAGTCCTGATG GAGAACTCTATGCCAGTGGTTCAGAAGATGGAACATTGAGACTATGGCAAACTGTGGTAGGAAAAACGTATGGCC TTTGGAAATGTGTGCTTCCTGAAGAAGATAGTGGTGAGCTGGCAAAGCCAAAGATTGGTTTTCCAGAGACAACAG AACTTGGTGTTACCTGTAAGTGAAAACTCAAGTGTCAGATGAAGGGAGGTGGAGTTATCCTCTTATAGTACAGTG GCCTGTTATCTTTTTAATGAATATATACAAGCCAACATCCAATTTCTATTATTACAATTAGGGTTCTTGTAGCTG TTGCTTCAGTTGTAAAGAAGAGGGAATACATGATAAAGTAACTGGTTTGATTTCTCGTTCATTGTACACTGCCTC

MAMRQTPLTCSGHTRPVVDLAFSGITPYGYFLISACKDGKPMLRQGDTGDWIGTFLGHKGAVWGATLNKDATKAA
TAAADFTAKVWDAVSGDELMTLAHKHIVKTVDFTQDSNYLLTGGQDKLLRIYDLNKPEAEPKEISGHTSGIKKAL
WCSEDKQILSADDKTVRLWDHATMTEVKSLNFNMSVSSMEYIPEGEILVITYGRSIAFHSAVSLDPIKSFEAPAT
INSASLHPEKEFLVAGGEDFKLYKYDYNSGEELESYKGHFGPIHCVRFSPDGELYASGSEDGTLRLWQTVVGKTY
GLWKCVLPEEDSGELAKPKIGFPETTEEELEEIASENSECIFPSAPDVKA

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3801/6881 FIGURE 3503

TGAAAAAGCCCCAGAGCCACATGTGGAGGAGGATGATGATGATGAGCTGGACAGCAAGCTCAATTATAAGCCTCC ACCACAGAAGTCCCTGAAAGAGCTGCAGGAAATGGACAAAGATGATGAGAGTCTAATTAAGTACAAGAAAACGCT GCTGGGAGATGGTCCTGTGGTGACAGATCCGAAAGCCCCCAATGTCGTTGTCACCCGGCTCACCCTGGTTTGTGA GAGTGCCCCGGGACCATCACCATGGACCTTACTGGAGATCTGGAAGCCCTCAAAAAGGAAACCATTGTGTTAAA GGAAGGTTCTGAATATAGAGTCAAAATTCACTTCAAAGTGAACAGGGATATTGTGTCAGGCCTGAAATACGTTCA ${\tt GCACACCTACAGGACTGGGGTGAAAGTGGATAAAGCAACATTTATGGTTGGCAGCTATGGACCTCGGCCTGAGGA}$ GTATGAGTTCCTCACTCCAGTTGAGGAGGCTCCCAAGGGCATGCTGGCGCGAGGCACGTACCACAACAAGTCCTT CTTCACCGACGATGACAAGCAAGACCACCTCAGCTGGGAGTGGAACCTGTCGATTAAGAAGGAGTGGACAGAATG AATGCATCCACCCCTTTCCCCACCCTTGCCACCTGGAAGAATTCTCTCAGGCGTGTTCAGCACCCTGTCCCTCCT $\verb|CCCTGTCCACAGCTGGGTCCCTCTTCAACACTGCCACATTTCCTTATTGATGCATCTTTTCCCACCCTGTCACTC|\\$ AACGTGGTCCCTAGAACAAGAGGCTTAAAACCGGGCTTTCACCCAACCTGCTCCCTCTGATCCTCCATCAGGGCC AGATCTTCCACGTCTCCATCTCAGTACACAATCATTTAATATTTCCCTGTCTTACCCCTATTCAAGCAACTAGAG ${\tt GCCAGAAAATGGGCAAATTATCACTAACAGGTCTTTGACTCAGGTTCCAGTAGTTCATTCTAATGCCTAGATTCT}$ TTTGTGGTTGTTGCTGGCCCAATGAGTCCCTAGTCACATCCCCTGCCAGAGGGAGTTCTTCTTTTGTGAGAGACA CTGTAAACGACACAAGAGAACAAGAATAAACAATAACTGTG

3802/6881 FIGURE 3504A

ATGGCCGACCTGGAGGAGCTCTCCCGCCTGAGCCCTCTGCCCCCCGGCAGCCCGGGTTCGGCGGGGGCGGGGCCGG GATGAGAGCAGCAGCAGCGGGGGGGGAGGAGAGTAGCGCCGAGAGCCTGGTGGGCAGCAGCGGCGGAGC AGCAGCGACGAGACCCGCTCGTTGAGCCCCGGCGCCGCCAGCAGCAGCAGCGGGGATGGGGACGGCAAGGAGGGC AGCGGCGGCGACGAGGGCTACGGGACTGGGGGAGGCGGAAGCAGCCGCGACCTCCGGGGGCCGGCGGGCAGCTTG GAGATGTCGTCGGATGGGGAACCCCTGAGCCGCATGGACTCGGAGGACAGCATAAGCAGTACTATAATGGATGTA GACAGCACAATTTCCAGTGGGCGTTCAACTCCAGCAATGATGAATGGACAAGGAAGCACTACTTCTTCAAGCAAA ${\tt CCATCTACCAGTCAAAGTTGGTTACAAAGGCATATGCTGACACACAGTGGAGACAAACCTTTCAAGTGTTGTT}$ TCCTCAAAAGTTTCTAGCCAGCCAAAGGCCAAAGAAGAATCTCCTTCTAAAGCTGGAATGAACAAAAGGAGGAAA TTAAAGAACAAAAGACGACGCTCATTACCACGGCCACATGATTTCTTCGATGCACAAACACTGGATGCGATAAGA CATCGAGCCATATGCTTTAACCTCTCAGCTCATATAGAAAGTTTAGGGAAGGGACACAGTGTTGTTTTTCATAGT ACTGTAATAGCTAAGAGAAAAGAAGATTCTGGGAAGATCAAACTTTTGCTTCATTGGATGCCTGAAGACATTCTG CCTGATGTGTGGGTGAATGAAAGTGAACGACATCAGTTAAAAACTAAAGTAGTTCATTTATCAAAGCTACCCAAA AAATACATAAAAAGCAAACAAGCGGGGACACCTGCAGTCTTAGTCACTGACAATGGGTTTAGGGAAAGTTGCACA TTAGAGTCAACCCCTTCTTTTTTTTTTTTTTTTTTTTTAAATCCAGTATTTAGGATAATATTTATGCTTAGTGTAA ACATTCTGTGAATGAAGTAGACTCTTCGGTGGAATATATTATTATTATTATTATTATCTGTATATCCACATTTTCATGGAATG CAACATGTGCCCTTACAAATACCAAAAGCACTGTAAGGATATTTGTCTTGACAGTGTTTATTGATTTGAAGTCAT ATTAGGAAATATTTAGACAATGAAAATTATCAAGAGATAATTTACCTTTCAATTATGATAAATAGATGTGATTGG TTGCCATTTGTGTTCTTTTGCAGAACTCTGATAAGAAAAGTGTTCAATTTGTATTTAAGCAAACAGTGAACGACG TTTGCAATCAACTAAAAATTCGTCTATCGAATTAGGGCTGAAAATTACTGTTAAAGAGTGTTGCAGTATGTCTGG TGGCTCCCTTTTCAGGACTAGGGCTTTCTCATGGAGTACAGTATGTTAATATTTACCTATATAACTAATCTGTTA ACGGTTTTTGAAAAACCTTTCAAATTATTTGAATAATCTTCATATTTTCATTTAACCTATATGACTCTAATTTTT GAAGCCATATCGATTTTTTTTTAACTTACAGAAATGGAAATATGTGTAACTTGTTAGTATTGTATTAAACAAATGT TGCATAGAGATAATAGAACATTGCTTGTAAATAATTCAGCAGATTTGTAATATATTTTTATATTTTGAAATGTAC TGTAGATGTTTTCTAGAGGCATGAAAGTTAAATGTATATATTATGGTAGAAATAATATTGAAGGATATTGTACTT CACTAGTGCTGCCAGAGGAATTGTTAATAAAAGCACCTTCTTTAACAATAAATGTCTTTCACAGACTTAAGGGAC TACCCATAATAGAATTATGGCACTCATTTCTGACAGTGATCAAGAAATCAGTTATTTCCTTACTGTTGGAAGGAC ATTGTAAAGTATGTGGTTATATGCAGTGAAACTGCAGAAAATACTCCTGGTTGAGGAGTTTTCACTTTACTACAG TGATATAAAAACCAGCAGTTTTTACACTAAATTTTTTAAAGAAATATTAGACAAAAATATAGAATTAAAAACCTTT GGTTCCAAAATGGGAAAGGTTCCACGATACATAAATCATTTCTCATTTGCTTTAAAAAATTTAAAAAGTGTAAAAAA TTATGAGAGACTTTATTCGTTAACAATGGGGGTAAAGAGCTATATACATGAAAATGAGTCTTATAAAATTAAGTG AAGTGCAAATAAAAGCACTGCTACTATAAGACATTCTGGAATGGTTGTTTAATAAGGGTATTATCCATTTGATCT TTCATCAATTGCTTTATTCTGTATCTGCGAAGTAATCTGCAATCTCTTTTGTTCTTTTTAAAATTTGATTTGTTA

3803/6881 FIGURE 3504B

MSSDGEPLSRMDSEDSISSTIMDVDSTISSGRSTPAMMNGQGSTTSSSKNIAYNCCWDQCQACFNSSPDLADHIR .
SIHVDGQRGGVFVCLWKGCKVYNTPSTSQSWLQRHMLTHSGDKPFKCVVGGCNASFASQGGLARHVPTHFSQQNS
SKVSSQPKAKEESPSKAGMNKRRKLKNKRRRSLPRPHDFFDAQTLDAIRHRAICFNLSAHIESLGKGHSVVFHST
VIAKRKEDSGKIKLLLHWMPEDILPDVWVNESERHQLKTKVVHLSKLPKDTALLLDPNIYRTMPQKRLKR

3805/6881 FIGURE 3506A

CAAAAGAAAGGAAGAAAGTCACAAAGGGCTGTCTGAGGCACATGATTGTGAAGAGTTAAAGGGAAAATCCATTCT TCTGCTTTGTGAGAGCTCTCAAGCTAAAGTAAATGAGCCTTTAGAAGCCAAACATGCAGCTAACAAGGTATGTA AGGCCAAGAGCACCACCTGGCTGCACCCGTCACCGGCGAGGCGGTGGTCACCGGACACCGGCGGCAGAGCACAG GGCCGCTACTCACTCCCGGTGACCCCCAGCTGCCGTCTTGCCCCCCAGCAATCTTCAGGCAGTCCTTACCCACT CCCCTCCCTGCAGCCCCGGACCCCGATCGCCCGCGGGATAACCGTGGCAGTTGGCTTCTAAGAGGAATTATCCT AGGAGAACAGACCACAGTTTTAGACACTTATAAAACTTCTGCTTATATCATGCTTTCCCATGTGGTCCTGGTTGA TGTATCAGATGGAAGGCAGATACGTTTAAGTCATGAGCGAGATCCACCCATCCTCATGTATCAGTTACAAATGCA CTGTCCTACCTGCGTTAGGACAAATGCACTAAAACTGTATAAAGTCTTCAGAGGATATTCAGTTGTCATAGAACT ACTTTCAGTCCGCTTTCCCAAAGGGAAATACATGATTCAGAGCAAATCATAAAATGGGTACACATCCATAATGA GACTGTTGCAACCATGACATCTGAAGAAAAGAAGGAACGGCCAATAAGTATGATAAATGAAGCTTCTAACTATAA TTTTGGAAAGAGGTCAAATTCAATTAAAAGGAATCCTAATGCACCGGTTGTCAGACGAGGTTGGCTTTATAAACA GGACAGTACTGGCATGAAATTGTGGAAGAAACGCTGGTTTGTGCTTTCTGACCTTTGCCTCTTTTATTATAGAGA TGAGAAAGAGGGTATCCTGGGAAGCATACTGTTACCTAGTTTTCAGATAGCTTTGCTTACCTCTGAAGATCA CATTAATCGCAAATATGCTTTTAAGGCAGCCCATCCAAACATGCGGACCTATTATTTCTGCACTGATACAGGAAA GATTACATCTGAAAATGCACCAACTAAAGAAACCAATAACATTCCCAACCATAGAGTGCTAATTAAACCAGAGAT CCAAAACAATCAAAAAAACAAGGAAATGAGCAAAATTGAAGAAAAAAAGGCATTAGAAGCTGAAAAATATGGATT TCAGAAGGATGGTCAAGATAGACCCTTAACAAAAATTAATAGTGTAAAGCTGAATTCTCTGCCATCTGAATATGA GAGTGGGTCAGCATGCCCTGCTCAGACTGTGCACTACAGACCAATCAACTTGAGCAGTTCAGAGAACAAAATAGT CAATGTTAGCCTGGCAGATCTTAGAGGTGGAAATCGCCCCAATACAGGGCCCTTATACACAGAGGCCGATCGAGT CATACAGAGAACAAATTCAATGCAGCAGTTGGAACAGTGGATTAAAATCCAGAAGGGGAGGGGTCATGAAGAAGA AACCAGGGGAAATATGCCAAGTCACAGAGCCCAGATTATGGCCCGCTACCCTGAAGGTTATAGAACACTCCCAAG AAACAGCAAGACAAGGCCTGAAAGTATCTGCAGTGTAACCCCTTCCACTCATGACAAGACATTAGGACCCGGAGC GGAGGAGAAACGGAGGTCCATGAGAGATGACACAATGTGGCAGCTCTACGAATGGCAGCAGCGTCAGTTTTATAA CAAACAGAGCACCCTCCCTCGACACAGTACTTTGAGTAGTCCCAAAACCATGGTAAATATTTCTGACCAGACAAT GCACTCTATTCCCACATCACCTTCCCACGGGTCAATAGCTGCTTATCAGGGATACTCCCCTCAACGAACTTACAG ATCGGAAGTGTCTTCACCAATTCAGAGAGGAGATGTGACAATAGACCGCAGACACAGGGCCCATCACCCTAAGCC AGAGGAGCTTACGCTGCTAATAAAGCTGAGACGGCAGCAAGCCGAACTGAGTAGTATCCGGGAGCATACGTT AGCACAGCTCATGCAGCTAAAGCTTGAGGCCCACAGCCCAAAGGTGGGAAGCCCCTCCTGTGTGCTCCCGTGGCA TCTGACCTCTGACACGTTGATGAATGATGATGAACTGCTGAAAAGAGATGGAACCTGCAATTGCAGTGATCATAT GGGCTGTCAGGGCACAAGACTGCCAAGAAAGAAGGAAAGTGACTGTCTACTGGAAGAATCTGTGCAGGCTCCATC ACAGGCAGCTGCAGCTCTGTATGAGGGCCTCTGGGGGAGCTGGGAACCTGTGCTTCTATGTGGGAACATGCTCCA CTGTTTCCAGCTTTGTATAGAAATTTCTAATCATATAAATCTCAGTATTCTTGGACATCAAGGAAGTCTTATATT TTTAAGCAACCCTGTCTGCTACCATCTTCCCAACACCCCACCACCATCTGTTTTGATGCCTACACAGAAGATAT AAGCCAGTGGATCCTACATTTTTTCAAGTATTTGCTGAAATACAAAGATTTATCAAAATTGCTAAGAAGCAGGG CTCATTCAGGCTCGAGGACGCTCTTGCATGTGAATTAAACCCACAGGAGACTGATGCACAAAACCAGAATAGAGC TTTATTTTACAATAAGAATTGTATAACTGCCGAGAGGTCAGAGAAGGACAGTGGGAAAATCACATTCTCTGCTCA AAGGCAGACTCTCCAGAAAGCCAGTTTACCGGGAACTGAGGGGATAACGAGAACATACGGAGGCAGCACGAGCGT CTACATAGCTATCTCTCAGGTTCTCTTTGCATTCCTCATCCGTACTGCTGATTACATGGGCCCAACTGGACACTA CATGTACATCGGGTACGAGCATCGATCCGTCACACTGGCTGCCCTTGGAGCTGGCTTCTCTGACAAGACTCCTGC TCACACTGTCACCATGGCTTGTATCTCTGCCAACCAAGCCATGACCACGGTGTATGCAACTTTGGTCAGCAGAA ACACAATACGAGCCTCTGGCTAGCTAAGGCACTCTATTCTGAAAGTACGGAAAACATGCACGGTCAGATTTTGGC

3806/6881 FIGURE 3506B

MECVEEKKVLAVPETLKKKRRNFAELKIKRLRKKFAQKTLRKTRRKLIYEKAKHYHKEYRQMYRTEIRKARMARK AGNFYVPAEPKLAFVVRIRGVNGVSPKVRKVLQLLRLRQIFNGTFVKLDKASINMLRIVEPYIAWGYPNLKSVNE LIYKRGYGKMNKKRIALTDNTLIARSLGKYGIICMEDLIHEIYTVGKGFKEANNFLWAFKLSSPRGGMKKKTTHF VEGGDAGNREDQVNRLIRRMN

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3810/6881 FIGURE 3510

MTSEKGEESNPGSLTSSMTPENFVKRPVCSTKSSGA

MTSEKGPSTGDPTLRRRIEPWEFDVFYDPRELRKEACLLYEIKWGMSRKIWRSSGKNTTNHVEVNFIKKFTSERD FHPSISCSITWFLSWSPCWECSQAIREFLSRHPGVTLVIYVARLFWHMDQQNRQGLRDLVNSGVTIQIMRASEYY HCWRNFVNYPPGDEAHWPQYPPLWMMLYALELHCIILSLPPCLKISRRWQNHLTFFRLHLQNCHYQTIPPHILLA TGLIHPSVAWR

 $\verb|CCCGGATGTGGAGAAGCTGGGGAGAAGGCGTGGGAGAAGATGGACTCGGTGGAGAAGGGGGCCGCCACCTCCGT|$ AGGTGTGGAGAAGCCCCCGCACCTGGCAGCCCTAATTCTGGCCCGGGGAGGCAAAGGCATCCCCCTGAAGAA TGTATGGGTTTCGACAGACCATGATGAAATTGAGAATGTGGCCAAACAATTTGGTGCACAAGTTCATCGAAGAAG TTCTGAAGTTTCAAAAGACAGCTCTACCTCACTAGATGCCATCATAGAATTTCTTAATTATCATAATGAGGTTGA CATTGTAGGAAATATTCAAGCTACTTCTCCATGTTTACATCCTACTGATCTTCAAAAAAGTTGCAGAAATGATTCG AGAAGAAGGATATGATTCTGTTTTCTCTGTTGTGAGACGCCATCAGTTTCGATGGAGTGAAATTCAGAAAGGAGT TCGTGAAGTGACCGAACCTCTGAATTTAAATCCAGCTAAACGGCCTCGTCGACAAGACTGGGATGGAGAATTATA TGAAAATGGCTCATTTTATTTTGCTAAAAGACATTTGATAGAGATGGGTTACTTGCAGGGTGGAAAAATGGCATA CAATGGCCACATTTATGTATCAGGAGACCAAAAAGAATAATATCTTATGATGTAAAAGATGCTATTGGGATAAG TTTATTAAAGAAAGTGGTATTGAGGTGAGGCTAATCTCAGAAAGGGCCTGTTCAAAGCAGACGCTGTCTTCTTT AAAACTGGATTGCAAAATGGAAGTCAGTGTATCAGACAAGCTAGCAGTTGTAGATGAATGGAGAAAAGAAATGGG CCTGTGCTGGAAAGAGTGGCATATCTTGGAAATGAAGTGTCTGATGAAGAGTGCTTGAAGAGAGTGGCCTAAG TGGCGCTCCTGCTGATGCCTGTTCTACTGCCCAGAAGGCTGTTGGATACATTTGCAAATGTAATGGTGGCCGTGG TGCCATCCGAGAATTTGCAGAGCACATTTGCCTACTAATGGAAAAGGTTAATAATTCATGCCAAAAATAGAAATT AGCGTAATATTGAGAAAAAAATGATACAGCCTTCTTCAGCCAGTTTGCTTTTATTTTTGATTAAGTAAATTCCAT TAATTATTTAGAGACTGATTACAGTCTTTCTCAGATTTTTAGTAAATGCAAGTAAGAACATCATCAAAGTTCACT TGTATGGTAAGACATGCCCTTCTATTAATAAAACTACATTTCTC

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3814/6881 FIGURE 3514

MDSVEKGAATSVSNPRGRPSRGRPPKLQRNSRGGQGRGVEKPPHLAALILARGGSKGIPLKNIKHLAGVPLIGWV LRAALDSGAFQSVWVSTDHDEIENVAKQFGAQVHRRSSEVSKDSSTSLDAIIEFLNYHNEVDIVGNIQATSPCLH PTDLQKVAEMIREEGYDSVFSVVRRHQFRWSEIQKGVREVTEPLNLNPAKRPRRQDWDGELYENGSFYFAKRHLI EMGYLQGGKMAYYEMRAEHSVDIDVDIDWPIAEQRVLRYGYFGKEKLKEIKLLVCNIDGCLTNGHIYVSGDQKEI ISYDVKDAIGISLLKKSGIEVRLISERACSKQTLSSLKLDCKMEVSVSDKLAVVDEWRKEMGLCWKEVAYLGNEV SDEECLKRVGLSGAPADACSTAQKAVGYICKCNGGRGAIREFAEHICLLMEKVNNSCQK

TATAACATCTCCTGCTAAGCAAAGCCCACTGACTAATTAGTCACCACTACAAGGAAAAAACAGCATTATTTTTA ACTGATTCTGCTTCTTCTCTGCAGGTTTCCTATCCTGGGAGCAGGAGAGTGTGCCTATTTGAATGACAAAGGTG CCAGTAGTGCCAGGCACTACACAGAGAGGGAAGTGGATTTGTTCCAAATCAGATATACATGTCTAGATGTTACAGC ATACCAACAGGTATATGAAAATATGCTCAATATCACTAATAACTGGGAAAATACAAATCAAAATCATAGTAAAAT ATTACCTGTTTTCATGGTGCTAATATTACCTGTTCTCCCACTGCTAATGACATACCCGAGACTGAGTAATTTATA AATAAAAGAGATTTAATTGACTCATAGTTCCACATGGCTGGGGAGGTCTTGCAATCATGACAGAAGGCAAATGGG AAGCAAAGTCATGTCTTATGTGGTGGCAGGCAGGGGGACTTGTGCACAGGAACTCCTATTTATACAACCATCAGA TATCTTGAGACAGAACAGTATGGGGCTCCCTGGTGTGATTCCGTCCTGCGGGCTGTTCTCTGGAGCAGCATTC GAGCCCCTGAGGCCCCAGAACTATCTTTTCAGTTGTGAACTAAAGGCCGACAAAGATGATCACTTTAAGGTGGA TAATGATGAAAATGAGACCAGTTATCTTTAAGAACGGTCAGCTCAGGGGCTGGTGCAAAGGATGAACTGCACATT GTTGAAGCAGAGGCCATGAATGACGAAGGCAGTCCAATTAAAGTAACACTGGCAACTTTGAAAAATGTCTGTACAG GATGATGATGATGATGATGATGATGATGATGACGAGGAAGCTGAAGAAAAAGCGCCAGTGAAGAAATCTATA CGAGATACTCCAGCCAAAAATGCACAAAAGTCAAATCAGAATGGAAAAGACTCAAAACCATCATCAACACCAAGA TCAAAAGGACAAGAATCCTTCAAAAAAACAGGAAAAATCTCCTAAAACACCAAAAGGATCTAGTTCTGTAGAAGAC GTGAAGAATTTCTTCTGGATGACCAAGAGGCTATTCAAGATCTCTGGCAGTGGAGGAAGTCTCTTTAAGAA AATAGTTTAAACAATTTGTTAAAAATTTTCCATCTTATTTCATTTCTGTAACAGTTGATATCTGGCTGTCCTTTT TATAGTGCAGAGTGAGAACTTTCCCTACCATGTTTGATAAATGTTGTCCAGGTTCTATTGCCAAGAATGTGTTGT TAGGACATAGTAGTAGCAGTGGTCAGACATGGAAATGGTGGGGAGACAAAAGTATACACGTGAAATAAAACTCAG TATTTTAATAAAGTAAAAAAA

 $\label{thmsvqptvslggfeitppvdlrlkcgsgpvhisgqhlvavkegaesedeeeedvkllsis\\ GKQSAPGGGQKKVKLAAAADDDDDEDDDDDDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPSSTPRSKGQE\\ SFKKQEKSPKTPKGSSSVEDIKAKMQASIEKRGSLPKVETKFINYVKNFFWMTDQEAIQDLWQWRKSL\\$

GGCGCCGGGGGACACGTTGGCTGCGTTTTCGGCGGGCCTCCCGGGTACAAAAATCGCTGTGGCTAGCGATTTCTA GCTTAGATATGCCAACAACAGCAATTACAAAAATGATGTGATCATCAGAAAAGAGGCTTATGTGCACAAGAGTGT AATGGAAGAACTGAAGAGAATTATTGATGACAGTGAAATTACAAAAGAAGATGATGCTTTGTGGCCTCCCCCTGA TAGGGTTGGCCGACAGGAGCTTGAAATTGTAATTGGAGATGAGCACATATCTTTTACCACATCAAAAATAGGTTC TCTTATTGATGTAAATCAGTCAAAGGATCCTGAAGGCCTTCGAGTATTTTACTATTTGGTACAAGACTTGAAATG TTTAGTTTTCAGTCTTATTGGATTACACTTCAAGATTAAACCAATT<u>TAAA</u>ATTGTATGTTTTCAGGCTGTTTGTAT AAATTTGTATGTAAACTGAAAATAAGAAAATACATTAGCAAGCTTAATGGTTATCCTTACTTGAGTCCACATGGG TTGGACAGTCCCCACACACATTAAATTCTGTAAATGAAAGCCACCTTTTGTTAAAAATTTTGCTCTAATAAAACAT ACCAAATCCTGGTTGCAGAGTAGTTTTTTGTTTTTTCCAGGAGGCTATGTCTCTAATTCACTTTAGAGATAATAA AAAGGCAAGTGTAGATTGTCCCTTATTTCCTTCATACATGATTGGATTTAATTTTGGGGGGGCTTATACAAGGTCT AGTTTTTTTTTACAGTTATGACAAACCCCTCAGGGATTATTCACATTTAAATATTTTCAGTTACAAGCAGTGAGG TCCTAAAGTGTTACAAGAGTACAGTCTACCCCATGTTAGGCATATCTTTGATTATGTCTTTATTCCTTATTTCAC AATGTATTTGGTGTGTAGGGGGGGGGGGGAGAACTAAATGAGTTTTCAGCTTTATAAATTGTTAAACATTTAGACA AACATATATGTATGTATGAATGTACATAAATATTTTTAACTCCTATTGACCACGAGTCTCACTTCAGTTTCCCAG $\tt TTCCTTTCAACCTCTTTCTGATAGATTTCCTCTTTCATTACTTTTAGTAACCATGTTCCTTGTTTCCTTTTATTC$ TTCCATCTGAAGCCCCACTCTTAAAAAGTTGCACTGTTCCAGTAGTTATAATCCACTTGCCCTAGGAACAAGTTA GCACTGAATTTTGGGTGGAATAATTAGTTTCTGAAGGCTTGCCAGGACCCCTGAGCAGGTAGGCTCTAGAGTCGG GCAGTCCAATAACTTTTTTGCAATAATGGAAACGTCCTATGTGCAGTCCAATAGGGTAGCAACTGGCCAAATGAG GCCTACTGATTACTTGAGGTGTGCCTTGTATAACTGAATTTATGGTGCTATTTAAACAATTTTTTTCTAACGTGA CTTAACATCTTTTTTACTGTAATATCTCTATTATAATAAATCTTGGTTTTTCACTTAACTGGTGTAATTGGTGCC **AATAAACTACTTTTTTTGTAGTGCTATTTAATTTTGATTAAATTTTAGATAGCCACGTGTCTAGCGGCTACCGTTT** GGACAGTATAGCTCTAGAGCATGGCTTGGTAACCTGTTTGCCATGGAGCACTAGATGGTCCTTTTCACTCCTCAA AATGCATGCCCATTGCCTTCAGGTTTGCCATGGAAAGTCAAATGATTTCCACTTCATTATGCAAGTACGCTATCA TCTTCAGGTCTTTTGTATGTAAAATGTTTCTGTTCCAGTTGTAGACCTTGATGATTGTGCAGTATGAAAATCGTAT TGTAATTTTCTTGCATTTAGATGTCAACCTCAGAAACAGGAACAATCGTCTTTTGAACTTCCAGTAGGCCCACAG TTGTTGGTTGTTCCTCAAAACAGGTTGTGGCTCCTGTTGAATAAGATGATCCATTAAAAACTGAACAAGGTTGAG GAGAAATAGTGCTTACGTTGAAAAATCTTTAAGTCTTTGTCCCCGTTCTCTAACTTCCTTACGTTTTCGTTTATT TAGCTCCATCCCCACTATCTACTAGAATTTCTCATATTTAAACCAAGATGGGAGACTAGGTCATTAGGAAAATAT TACCGTCTACAATTTTCTTATACTTTGATCTGTCTTTTATTTGATTGTAAGTTGCTGATGGACAGTGATCATTAG CCTTCCTTAATAAAGAGACCACTTGAAAT

MAVASDFYLRYYVGHKGKFGHEFLEFEFRPDGKLRYANNSNYKNDVMIRKEAYVHKSVMEELKRIIDDSEITKED DALWPPPDRVGRQELEIVIGDEHISFTTSKIGSLIDVNQSKDPEGLRVFYYLVQDLKCLVFSLIGLHFKIKPI

TCGAGCCGCCTCCGCCGCGCGACCCCACCTCGGCCGCCGCCGCCTGCGCCGCGAGATCCGCCCCGGCCTCCCCGA GAGCGAGCCCGGCCGCCGACCACCAGCCGCGCTAACCGCCGACCAACCGCCACCGAGGCGCCTGAGCGAGAG GGAGGCGGCCGCGGGCTCCCCAGGACCCCGCGCCCCAAGAGCCCGGTGGGCAGCGGTGCGCCCCAGGCCGCGGC CGCCTCTTTAGCCACCGCCGCCGCCAGCGAAGACGCGAGAAAAAAGTTCTCGCCACCAAAGTCCTTGGCACTGT CAAATGGTTCAACGTCAGAAATGGATATGGATTTATAAATCGAAATGACACCAAAGAAGATGTATTTGTACATCA GACTGCCATCAAGAAGAATAACCCACGGAAATATCTGCGCAGTGTAGGAGATGGAGAAACTGTAGAGTTTGATGT GGTTGAAGGAGAAGGGTGCAGAAGCTGCCAATGTGACTGGCCCGGATGGAGTTCCTGTGGAAGGGAGTCGTTA CGCTGCAGATCGGCGCCGTTACAGACGTGGCTACTATGGAAGGCGCCGTGGCCCTCCCCGGAATGCTGGTGAGAT TGGAGAGATGAAGGATGGAGTCCCAGAGGGAGCACAACTTCAGGGACCGGTTCATCGAAATCCAACTTACCGCCC AAGGTACCGTAGCAGGGGACCTCCTCGCCCACGACCTGCCCCAGCAGTTGGAGAGGCTGAAGATAAAGAAAATCA GCAAGCCACCAGTGGTCCAAACCAGCCGTCTGTTCGCCGTGGATACCGGCGTCCCTACAATTACCGGCGTCGCCC GCGTCCTCAACGCTCCTTCACAAGATGGCAAAGAGGCCCAAGGCAGGTGAAGCACCAACTGAGAACCCTGCTCC ACCCACCCAGCAGAGCAGTGCTGAGTAACACCAGGCTCCTCAGGCACCTTCACCATCGGCAGGTGACCTAAAGAA TTAATGACCATTCAGAAATAAAGCAAAAGCAGCCACAACCTTAACCAACACCAAAGAAACATCCAAGCAATAA AGTGGAAGACTAACCAAGATTTGGACATTGGAATGTTTACTGTTATTCTTTAAGAAACAACTACAAAAAAGAAAAT GTCAACAAATTTTTCCAGCAAGCTGAGAACCTGGGAATTCCTGCACGGAAGACAAGAGAGTAGCCTCTCCAGTTT TCTAGGATGAGGGGAGGATAACATTTTTGCTTTCTTATGTGACTCTCTTTGAAAATGTGCAGTAAGAAATTCCTC AAAAATAAAATTTTTACCCTTCAGAGG

 $\verb|MLLVLLSVVLLALSSAQSTDNDVNYEDFTFTIPDVEDSSQRPDQGPQRPPPEGLLPRPPGDSGNQDDGPQQRPPK|\\ PGGHHRHPPPPFFQNQQRPPQRGHRQLSLPRFPSVSLQEASSFFRRDRPARHPQEQPLW|\\$

MLLILLSVALLAFSSAQDLNEDVSQEDVPLVISDGGDSEQFIDEERQGPPLGGQQSQPSAGDGNQDDGPQQGPPQ QGGQQQQGPPPPQGKPQGPPQQGGHPPPPQGRPQGPPQQGGHPRPPRGRPQGPPQQGGHQQGPPPPPPGKPQGPP PQGGRPQGPPQGQSPQ

MLLILLSVALLAFSSAQDLDEDVSQEDVPLVISDGGDSEQFIDEERQGPPLGGQQSQPSAGDGNQNDGPQQGPPQ QGGQQQQGPPPPQGKPQGPPQQGGHPPPPQGRPQGPPQQGGHPRPPRGRPQGPPQQGGHQQGPPPPPPGKPQGPP PQGGRPQGPPQGQSPQ

 $\verb|CCTCTAGCCCTCCCTGCGTTTAGATTCAGTTGCACCTTTTATTATTTTAACTCTTCTCCTTAGGACACGCAGCCC| \\$ CGCCGGCGTGTGCAAGGAGGTCCAGCCGCCGCCCCGCTACCCGGAGTCTGAGGACGGGTGTCCAGGGACGGAGA GAGTATGTGCTGCGCGCATCGCCGCAGAGAACCTGCGCAAGCCGCGCATCCGAGACCGCCTCCCCAAAGCCCGC $\verb|TTCATCGCCAAGAGCGGGGCCTGCAACCTGGCGCATAAGAACATCCGTGAGCAAGGACGCTTTCTACAGGACATC| \\$ CTCTTCGCTATCATGTGGTGGCTGGTGGCCTTTGCCCATGGGGACATCTATGCTTACATGGAGAAAAGTGGAATG GAGAAAAGTGGTTTGGAGTCCACTGTGTGTGTGTGACTAATGTCAGGTCTTTCACTTCTGCTTTTCTCTTCTCCATT GAAGTTCAAGTTACCATTGGGTTTGGAGGGAGGATGATGACAGAGGAATGCCCTTTGGCCATCACGGTTTTGATT CTCCAGAATATTGTGGGTTTGATCATCAATGCAGTCATGTTAGGCTGCATTTTCATGAAAACAGCTCAGGCTCAC AGAAGGGCAGAAACTTTGATTTTCAGCCGCCATGCTGTGATTGCCGTCCGAAATGGCAAGCTGTGCTTCATGTTC CGAGTGGGTGACCTGAGGAAAAGCATGATCATTAGTGCCTCTGTGCGCATCCAGGTGGTCAAGAAAACAACTACA CCTGAAGGGGAGGTGGTTCCTATTCACCAACTGGACATTCCTGTTGATAACCCAATCGAGAGCAATAACATTTTT CTGGTGGCCCCTTTGATCATCTGCCACGTGATTGACAAGCGCAGTCCCCTGTATGACATCTCAGCAACTGACCTG GCCAACCAAGACTTGGAGGTCATAGTTATTCTGGAAGGAGTGGTTGAAACTACTGGCATCACCACACAAGCACGA ACCTCCTACATTGCTGAGGAGATCCAATGGGGCCACCGCTTTGTGTCCATTGTGACTGAGGAAGAAGGAGTGTAT TCTGTGGATTACTCCAAATTTGGCAACACTGTTAAAGTAGCTGCTCCACGGTGCAGTGCCCGAGAGCTGGATGAG AAACCTTCCATCCTTATTCAGACCCTCCAAAAGAGTGAACTGTCTCATCAAAATTCTCTGAGGAAGCGCAACTCC ATGAGAAGAACAATTCCATGAGGAGGAACAATTCTATCCGAAGGAACAATTCTTCCCTCATGGTACCAAAGGTG CAATTTATGACTCCAGAAGGAAATCAAAACACATCGGAATCATGACAGCAAGATAACCCCCAAGACAGTCTTTTAT ${\tt CAAGTTTTGACGGTTTATGCTGGGCACTGCCAGACTGAACCAGAGCTGGAACACAATAATGTGTCCTTCTACATT}$ TTATTACACTAAATGATATTCATATTCAAGCAACAGCACTTTCTGTAGTAATAAAAAGTAACACCAAGTGGAG GATTCATGCTTATGCTTGTTT

MLARKSIIPEEYVLARIAAENLRKPRIRDRLPKARFIAKSGACNLAHKNIREQGRFLQDIFTTLVDLKWRHTLVI FTMSFLCSWLLFAIMWWLVAFAHGDIYAYMEKSGMEKSGLESTVCVTNVRSFTSAFLFSIEVQVTIGFGGRMMTE ECPLAITVLILQNIVGLIINAVMLGCIFMKTAQAHRRAETLIFSRHAVIAVRNGKLCFMFRVGDLRKSMIISASV RIQVVKKTTTPEGEVVPIHQLDIPVDNPIESNNIFLVAPLIICHVIDKRSPLYDISATDLANQDLEVIVILEGVV ETTGITTQARTSYIAEEIQWGHRFVSIVTEEEGVYSVDYSKFGNTVKVAAPRCSARELDEKPSILIQTLQKSELS HQNSLRKRNSMRRNNSMRRNNSIRRNNSSLMVPKVQFMTPEGNQNTSES

CTGTGCAAAATGGCAACTCTTAAGGAAAAACTCATTGCACCAGTTGCGGAAGAAGAGGCCAACAGTTCCAAACAAT AAGATCACTGTAGTGGGTGTTGGACAAGTTGGTATGGCGTGTGCTATCAGCATTCTGGGAAAGTCTCTGGCTGAT GAACTTGCTCTTGTGGATGTTTTGGAAGATAAGCTTAAAGGAGAAATGATGGATCTGCAGCATGGGAGCTTATTT CTTCAGACACCTAAAATTGTGGCAGATAAAGATTATTCTGTGACTGCCAATTCTAAGATTGTAGTGGTAACTGCA GGAGTCCGTCAGCAAGAAGGGGAGAGTCGGCTCAATCTGGTGCAGAGAAATGTTAATGTCTTCAAATTCATTATT ${\tt CCTCAGATCGTCAAGTACAGTCCTGATTGCATCATAATTGTGGTTTCCAACCCAGTGGACATTCTTACGTATGTT}$ ACCTGGAAACTAAGTGGATTACCCAAACACCGCGTGATTGGAAGTGGATGTAATCTGGATTCTGCTAGATTTCGC AGTGTGGCTGTGTGGAGTGTGTGAATGTGGCAGGTGTTTCTCTCCAGGAATTGAATCCAGAAATGGGAACTGAC AATGATAGTGAAAATTGGAAGGAAGTGCATAAGATGGTGGTTGAAAGTGCCTATGAAGTCATCAAGCTAAAAGGA TATACCAACTGGGCTATTGGATTAAGTGTGGCTGATCTTATTGAATCCATGTTGAAAAATCTATCCAGGATTCAT ${\tt CCCGTGTCAACAATGGTAAAGGGGATGTATGGCATTGAGAATGAAGTCTTCCTGAGCCTTCCATGTATCCTCAAT}$ GCCCGGGGATTAACCAGCGTTATCAACCAGAAGCTAAAGGATGATGAGGTTGCTCAGCTCAAGAAAAGTGCAGAT ACCCTGTGGGACATCCAGAAGGACCTAAAAGACCTGTGACTAGTGAGCTCTAGGCTGTAGAAATTTAAAAACTAC AATGTGATTAACTCGAGCCTTTAGTTTTCATCCATGTACATGGATCACAGTTTGCTTTGATCTTCTTCAATATGT GAATTTGGGCTCACAGAATCAAAGCCTATGCTTGGTTTAATGCTTGCAATCTGAGCTCTTGAACAAATAAAATTA ACTATTGTAGTGTG

TCGGCGGCGCATCGCGGGCGTCACTTGTGCGGAGCAGTTGGCTACTCACTTTCCATCGGAAGATATTCTCTTGG TAACAGCTTCTCCTGTTATTAAAGCAGTTACAAATTTCAAGCAGATTTCTAAAATATTGGAAGAATTCGATGTTG AAGAACAATCAAGTACCATGTTAGGAAAACGCTTTCCCAACATTAAGGTTATAGAATCTGGCGTAAAGCAACTGA AGANACAGCTTACTAAAGCTAAAAGAATAATGATCATAGGGAACGGTGGTATTGCACTTGAGTTAGTGTATGAAA TTGAAGGCTGTGAAGTGATTTGGGCCATTAAAGATAAAGCTATAGGGAATACTTTCTTCGATGCAGGAGCAGCTG AATTCTTGACTTCAAAGCTCATTGCTGAAAAATCAGAGGCTAAAATTGCACATAAAAGAACCAGATATACAACTG AAGGAAGGAAAAAGGAAGCTAGAAGCAAATCTAAAGCAGATAATGTAGGAAGTGCATTGGGACCAGATTGGCATG AAGGCTTGAATCTTAAAGGAACAAAAGAGTTTTCTCATAAGATTCACCTTGAAACTATGTGTGAAGTAAAGAAAA TCTACCTTCAGGATGAGTTTAGAATTTTGAAGAAAAAGTCCTTCACTTTTCCAAGAGACCATAAGTCAGTTACAG CTGATACAGAGATGTGGCCTGTCTATGTGGAATTGACCAATGAAAAGATATATGGCTGCGATTTCATTGTCAGTG CTACAGGAGTTACACCAAATGTAGAACCTTTTCTCCATGGTAACAGTTTTGATCTAGGAGAAGATGGTGGCCTGA AAGTGGATGATCATATGCACACCTCCCTGATATCTATGCTGCCGGTGACATCTGTACTACATCCTGGCAGC TGAGCCCAGTCTGGCAGCAGATGAGGCTGTGGACCCAGGCTAGACAGATGGGATGGTATGCAGCAAAGTGCATGG $\tt CTGCAGCGAGTTCAGGAGACTCTATTGACATGGATTTCAGCTTTGAACTGTTTGCTCATGTGACAAAATTTTTTA$ ACTATAAGGTTGTACTGCTGGGAAAATACAATGCACAGGGCTTAGGTTCAGATCATGAATTAATGCTGAGATGTA $\tt CCAAAGGACGAGGAATACATCAAAGTCGTCATGCAAAATGGACGAATGATGGGAGCTGTCTTAATTGG\underline{T}GAAACC$ GATTTAGAAGAAACATTTGAAAACCTAATCTTAAACCAAATGAATCTTTCATCATATGGAGAAGATCTGCTAGAT CCAAATATTGATATAGAAGATTATTTTGACTAAAAATGGAATTTCTTCAGGAATCATATAAAGTTCCAAATGACA CCAGAAAAATCACAAGTCAATAAAATGAATGACTGTATTGAGTTAATGATGACCACACTGAAAATTACAGAAGTG TTTACTTGTGATTTAGCTTTGGAGCAAATTTAGGTAAGTTATCTACTTAGCCAAATGTACTCTAGTAGACTAGAA CCATTCTTTGTGAAATGTCAAAATATGGCTATGGTTTCAGGAACTTTAAAATCGGTTGTATTTTACTTTAAATAG AGATGTAGCAATATCTCGTTTGCTAATATTTATATTGATGACTTACTCCTTTTTTGTTGAATTGTACTTCTGGTT TTATAACCTGAAATCATCTACAAGCTTGTCCAACTCTAGCCCACGGGTCTAATGCAGCCCAGAACAGCTTTGAAT AGCTATCGTCAGTGTTAGCATATTTTATGTGCGGCCCAAGACAATTCTTCTCCAATGTGGCTCAGGGAAGCCAA AAGATTGGACATCCCTGATCTACATATTTAACTTAAAGTATCACTCAGTGAACCTCTGTCAGTATAATATTGCTT TCAAAAAGATGGTTATGTCAAAAGAAAAAATATAGCTAAGTATATAAAGGCATAAAAAACTTAAGACAATTACAT AAGCTCATCAGCTATCATCAGTGTTAGCATATTTTATGTGCGGCCCAAGACAATTCTTCTTCCAATGTGGCTCAG GGAAGCCAAAAGATTGGACATCCTTGATCTACATATTTAACTTAAAGTATCACTCAGTGAAATTCTTTTAAAAAAC TATTGTCTAACTACAAAAATAATGGCATATACATGCATAAACCATCTTTAATTAGAAAATTTAGTAACAGTCATA TCAGGCATCATCGATTTTTCTTTCTTAGCTCCTGTATTCTTAGAACCAGATTGCTGAAGCATGTTTGCAGCCTT CTTCTGGAAGTTGCCTGAATTTTTTCCTCCATCTTTTTATCACCTTGTTCAGAATGACAAGTTTGAGACGATTC AGCCTACAAAAAAAAAAAAAAAAA

MEAARPPPTAGKFVVVGGGIAGVTCAEQLATHFPSEDILLVTASPVIKAVTNFKQISKILEEFDVEEQSSTMLGK.
RFPNIKVIESGVKQLKSEEHCIVTEDGNQHVYKKLCLCAGAKPKLICEGNPYVLGIRDTDSAQEFQKQLTKAKRI
MIIGNGGIALELVYEIEGCEVIWAIKDKAIGNTFFDAGAAEFLTSKLIAEKSEAKIAHKRTRYTTEGRKKEARSK
SKADNVGSALGPDWHEGLNLKGTKEFSHKIHLETMCEVKKIYLQDEFRILKKKSFTFPRDHKSVTADTEMWPVYV
ELTNEKIYGCDFIVSATGVTPNVEPFLHGNSFDLGEDGGLKVDDHMHTSLPDIYAAGDICTTSWQLSPVWQQMRL
WTQARQMGWYAAKCMAAASSGDSIDMDFSFELFAHVTKFFNYKVVLLGKYNAQGLGSDHELMLRCTKGRGIHQSR
HAKWTNDGSCLNW

ACTGGCTGCTCTGAAAAGCCATCTTTGCATTGTGCCTCGTCAGCCTCCTTGCTCGCCGCAGCCGCCTCCGCGGCG TGCATCGCGTCACCGGCGTGCCCCACCATGTCAGACGCAGCCGTAGACACCAGCTCCGAAATCACCACCGAGGAC TTAAAGGAGAAGAAGGAAGTTGTGGAAGAGGCGGAAAATGGAAGAGACGCCCCTGCTAACAGGAATGCTAATGAG GAAGGTGATGGTGAGGAAGAGGACGGAGATGAAGATGAGGGGAGCTGAGTCAGCTACGGGCAAGCGGGCAGCTGAA GATGATGAGGATGACGATGTCGATACCCAGAAGCAGAAGACCGACGACGATGACCAGACAGCAAAAAAGGAAAAAG TTAAACTAAAAAAAAAAAGGCCGCCGTGACCTATTCGCCCTCCACTTCCCGTCTCAGAATCTAAACGTGGTCACCT TCGAGTAGAGGGGCCCGCCGCCCACCGTGGGCAGTGCCACCCGCAGATGACACGCGCTCTCCACCACCCAACCC ${\tt TACTTTAAAAAGGAAACTTGTATTTTTATTTACATTTTATATTTTTGTACATATTGTTAGGGTCGGCCATTTTT$ AATGATCTCGGATGACCAAACCAGCCTTCGGAGCGTTCTCTGTCCTACTTCTCACTTTACTTGTGGTGTGGCCAT GTTCATTATATCTCAAAGGAGAAAAAAAACTTGTAAAAAATGCAAAAATGACAACAGAAAAAACCATCTTATTC CGAGCATTCCAGTAACTTTTTTGTGTATGTACTTAGCTGTACTATAAGTAGTTGGTTTGTATGAGATGGTTAAAA TATGTGTGAAACAATGTTGTCCAACAATAAACAGGAATTTTATTTTGCTGAGCTGTTCT

3833/6881 FIGURE 3533A

AGTAGGGAGGTGGGCAGGAGCCAGTGATGACGGAATGGCAATCACATTTGACCTCTGATCTGTTTATTTCCTCCT CCTTGACGTCTCCATATAAATGTTACACGGGCATCCCCACACTCGGATACGCACCCACAGTGGCTGATTCGGGGG CTGGGCGCTGGCTCCGAATCTTCGGGCTGGGAGAGACTCCACCATCTGGGGGCGGCCTGGGGGAGCAGCCTTAGT GTCTTCCTGCTGATGCAATCCGCTAGGTCGCGAGTCTCCGCCGCGAGAGGGCCGGTCTGCAATCCAGCCCGCCAC GTGTACTCGCCGCCCCCCGGGCACTGCCCCAGGTCTTGCTGCAGCCGGGACCGCGCTCTGCAGCCGCAGACCCG GTCCACACGGCCAGGGGCTACGACCCTTGGGATCTGCCCTCCGCTCAGCTCGAGCTTCCCTCGTGGCCGACGGAA CAATGAAGGATTGCAGTAACGGATGCTCCGCAGAGTGTACCGGAGAAGGAGGATCAAAAGAGGTGGTGGGGACTT TTAAGGCTAAAGACCTAATAGTCACCAGCTACCATTTTAAAGGAAAAACCAGACCCCAATAATCTGGTTTTTG GAACTGTGTTCACGGATCATATGCTGACGGTGGAGTGGTCCTCAGAGTTTGGATGGGAGAAACCTCATATCAAGC CTCTTCAGAACCTGTCATTGCACCCTGGCTCATCAGCTTTGCACTATGCAGTGGAATTATTTGAAGGATTGAAGG CATTTCGAGGAGTAGATAATAAAATTCGACTGTTTCAGCCAAACCTCAACATGGATAGAATGTATCGCTCTGCTG TGAGGGCAACTCTGCCGGTATTTGACAAAGAAGAGCTCTTAGAGTGTATTCAACAGCTTGTGAAATTGGATCAAG TCAAGAAGCCTACCAAAGCCCTGCTCTTTGTACTCTTGAGCCCAGTGGGACCTTATTTTTCAAGTGGAACCTTTA ATCCAGTGTCCCTGTGGGCCAATCCCAAGTATGTAAGAGCCTGGAAAGGTGGAACTGGGGACTGCAAGATGGGAG GGAATTACGGCTCATCTCTTTTTGCCCAATGTGAAGCAGTAGATAATGGGTGTCAGCAGGTCCTGTGGCTCTATG GAGAGGACCATCAGATCACTGAAGTGGGAACTATGAATCTTTTTCTTTACTGGATAAATGAAGATGGAGAAGAAG AACTGGCAACTCCTCCACTAGATGGCATCATTCTTCCAGGAGTGACAAGGCGGTGCATTCTGGACCTGGCACATC AGTGGGGTGAATTTAAGGTGTCAGAGAGATACCTCACCATGGATGACTTGACAACAGCCCTGGAGGGGAACAGAG TGAGAGAGATGTTTGGCTCTGGTACAGCCTGTGTTGTTTGCCCAGTTTCTGATATACTGTACAAAGGCGAGACAA TACACATTCCAACTATGGAGAATGGTCCTAAGCTGGCAAGCCGCATCTTGAGCAAATTAACTGATATCCAGTATG GAAGAGAGAGAGCGACTGGACAATTGTGCTATCC<u>TGA</u>ATGGAAAATAGAGGATACAATGGAAAATAGAGGATAC CAACTGTATGCTACTGGGACAGACTGTTGCATTTGAATTGTGATAGATTTCTTTGGCTACCTGTGCATAATGTAG TTTGTAGTATCAATGTGTTACAAGAGTGATTGTTTCTTCATGCCAGAGAAAATGAATTGCAATCATCAAATGGTG TTCCTCAATGATTTTAGTGCCTCCTTTTGTACTTCACTCAGATACTAAATAGTAGTTTATTCTTTAATATAAGTT CCCATCACTGTTTTTTGAAGGTCCTCCAAGTCCGTGTTAAGGTAAATATCTGTTTTCTTCCTGATGTCACAGCCT GAGCATACTCTGTGCATTAGGAAGACCTGAGTGCATTTCCCACCATTGTCCTTTCCACATTATGTTGTAGCTGGC TGGCTGTCAGGCGACTACAAGACTGAGGGTCTTGTGCCTTATAGATCTTTGTATCCCCCATGGCTGACATATAGT AGGTACTCAGTAAATGGTTTTATAATGAATCAGTGAACATTTTGCTTCTATAGAAGTGTACCTTCTTTGTTTCTA TATTATGAAACCTCTTTATTAGAATTTGTGATTGATTCTGACAGTGTATAGATTTACCTTATATTGTCTTTATTT AGAATTATCTTGGAATTGAAGATATATCCCTAGAGCAGGGGACCCCAACCCCCAGGCCATGGGCCACACAGCAGGAGCAGG AAGAGGTGAGTGGGCCCATTGAGGAGCTTCATCTGTATTTATGGCTACTTCCCATCACTCGAATTACCACCTG AACTCCACCTCTTGTCAGCTCAGTGGCAGCATTAGATTCTCATAGGAGCACAAATCCTATTGTGAACTCTGCATG CAAGGGATCTAGGCTATGCGCTCCTTATGAGAATCTAATGCTTGATGACCTGAGGTGTAACAGTTTCATCCTGAA ACCACCCTTCACCCTGCAGTCTGTGGAAAAATTGTCTTCCACAAAACTGGTCCCTGGTGCCAAAAATGTTGGGGA ${\tt GCAGGTGCTCTTTCTTTGAATGGAGATTTGATGAGCAAGTGGTTAGGATGCAGGGAGAGCTACTATGGGTGATA}$ TTTTCCTTGTTTAGGAGCTGTGAGTTAAAATTGTATCCTTTGTGGTTTATCTAAGGAAAGTCAAATCTTGACAGA CTGAACATATTTTATTCTCTTTTCAGAGAAGGAAAATAAAAAGGATTCTAAAAGTTTGATGCATTGGAAAAATTT CCTTGAGGCATTTAGCAACACATAGAAAATGGGCTTTGATTCTTTTCCAAAACTTTTAGCCATAGGGTCTTTTAT AGACAGGGATAGTAAAATGAAAATTGAGAAATATAAGATGAAAAGGAATGATAAAAATATCTTTTAGGGGGCTTT

PCT/US2003/028547

3834/6881 FIGURE 3533B

TAATTGGTGATCTGAAATCTTGGGAGAAGCTGTTCTTTTCAGGCCTGAGGTGCTCTTGACTGTCGCCTGCGCACT GTGTACCCCGAGCAACATTCTAAGGGTGTGCTTTCGCCTTGGCTAACTCCTTTGACCTCATTCTTCATATAGTAG TCTAGGAAAAAGTTGCAGGTAATTTAAACTGTCTAGTGGTACATAGTAACTAAATTTCTATTCCTATGAGAAATG AGAATTATTTATTTGCCATCAACACATTTTATACTTTGCATCTCCAAATTTATTGTGGCGAGACTTGTCCATTGT GAAAGTTAGAGAACATTATGTTTGTATCATTTCTTTCATAAAACCTCAAGAGCATTTTTAAGCCCCTTTTCATCAG ACCCAGTGAAAACTAAGGATAGATGTTTAAAAACTGGAGGTCTCCTGATAAGGAGAACACAATCCACCATTGTCA TTTAAGTAATAAGACAGGAAATTGACCTTGACGCTTTCTTGTTAAATAGATTTAACAGGAACATCTGCACATCTT TTTTCCTTGTGCACTATTTGTTTAATTGCAGTGGATTAATACAGCAAGAGTGCCACATTATAACTAGGCAATTAT CCATTCTTCAAGACTTAGTTATTGTCACACTAATTGATCGTTTAAGGCATAAGATGGTCTAGCATTAGGAACATG TGAAGCTAATCTGCTCAAAAAGATCAACAAATTAATATTGTTGCTGATATTTGCATAATTGGCTGCAATTATTTA ATGTTTAATTGGGTTGATCAAATGAGATTCAGCAATTCACAAGTGCATTAATATAAACAGAACTGGTGGCACTTA AAATGATAATGATTAACTTATATTGCATGTTCTCTTCCTTTCACTTTTTCAGTTTCTACATTTCAGACCGAGCT TGTCAGCTTTTTTGAAAACACATCAGTAGAAACCAAGATTTTAAAATGAAGTGTCAAGACAAAGGCAAAACCTGA GCAGTTCCTAAAAAGATTTGCTGTTAGAAATTTTCTTTGTGGCAGTCATTTATTAAGGATTCAACTCGTGATACA TTAGCCTTTGTTTCAAAAGCACAAAGGAAAAGTGAAAGGGAAAGAGAAACAAGTGACTGAGAAGTCTTGTTAAG GAATCAGGTTTTTCTACCTGGTAAACATTCTCTATTCTTTTCTCAAAAGATTGCTGTAAGAAAAATGTAAGAC

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3836/6881 FIGURE 3535

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CCAGCACTAACTATCCATGTCCAGGGTAAGGATCGAGATCGAGAAGCCCACACTGCCAGTGAAAAAGCTACGTCT TTACTGCATAAATTAGAGGAAGCAATTTCGGAACAACGGAACCTTCAAACTATAAATACTGAATTATCGAACACT TGCCAGGCACTTCAGCAGAAGACAAGGAAACTGAAGAAGCTTTTTAGATGAGGAATTTCCTCACTATGATTCCCT GTCCTGCGCAGATGCAATTCAACAACCTCTTCAAGAAAAATTGAAGCAGTGTTGCCACAAACTATATGGTGGTCA AGAAGCAAGAATACATCAGACCCCTGACCTTGAAACATACGTGCTGGTACACACCTCTGCTGGATGCCTTATC GTGTGAAAGGCCCACATATGGAGAAGTAAAGGATGGTGCTTTTGGATGTAAAAAGACACAACACGTGCCCAGGCCC TGGTGTTGAACGCGTGTGTCCTGAGAGCCTGCTGCAGTCCAGGGAATATTCCTCACTACCATTACCCAGACACAC TTCATCGACAGACGGTACTATAACTTCAAGTGATCCTGGATTAGAAATTCTGAATATGGCTTCTTGTGACCTTGA CAGAAACTCGCTCTGTAAGAAAGAGGGGGATACAAGATCAGCTTCTCCCACGATAGAGGCCCCAAGGCACAAGTCC AGCTCATGATAATATTGCATTCCAAGACTCTACGAGTAAGGATAAAACCATATTAAATCTGGAAGCCAAAGAGGA ACCAGAAACAATAGAAGAACATAAAAAAGAACATGCTTCAGGAGACTCTGTGGTTTCCCCTCTTCCTGTAACCAC TGTGAAATCGGTTAACCTTAGACAAAGTGAGAACACTTCTGCTAATGAGAAGGAGGTGGAGGCAGAATTTCTCAG ATTATCTTTGGGATTTAAGTGTGACTGGTTTACCTTGGAGAAGAGAGTGAAGCTTGAAGAGAGGTCCCGTGACTT GGCAGAAGAAATTTGAAGAAAGAAATCACTAACTGTTTAAAACTATTAGAGTCTTTAACACCTCTGTGTGAAGA TGACAACCAGGCACAGGAAATCATTAAGAAGCTGGAGAAGAGTATAAAGTTTCTTAGCCAGTGTGCAGCACGAGT GGCCAGTAGGGCTGAGATGTTGGGAGCCATCAATCAGGAAAGCCGGGTTAGTAAAGCAGTTGAAGTGATGATTCA GCACGTAGAAAACTTGAAGAGGATGTATGCCAAAGAGCACGCTGAATTAGAAGAACTGAAACAGGTTCTTCTGCA GAATGAAAGGTCTTTCAATCCTCTTGAAGATGATGATGACTGCCAAATTAAAAAACGTTCAGCTTCTAAACTC CAAGCCATCTTCTCTACGAAGAGTGACTATTGCCTCTTTACCCAGAAATATTGGAAATGCAGGAATGGTGGCTGG GATGGAAAATAATGATCGATTCAGTAGAAGGTCAAGCAGTTGGCGTATTTTGGGGTCAAAGCAGAGTGAACACCG TCCCTCATTACCTCGATTTATTAGCACCTATTCCTGGGCAGATGCTGAAGAAGAAAAATGTGAACTAAAAACTAA AGATGACTCAGAGCCATCTGGAGAAGAAACAGTAGAAAGGACAAGGAAGCCAAGTCTTTCTGAAAAAGAAAAATAA TCCATCAAAGTGGGATGTCTCTCAGTTTATGACACAATAGCTTCCTGGGCAACAAATCTCAAGTCCTCCATCAG CCAATTATTCCAGAAGTCTGTGGATGCCGCTCCCACACAGCAAGAGGACTCATGGACGTCTCTAGAACATATCTT GTGGCCATTTACCAGACTCCGACACAATGGGCCACCACCAGTGTGACAGCAGGACATCCTAATATATGGATCTTG ATTTTTAAGTTTCAGTATCTGAACTTCGTAAATTAGTAACTTTTAGCTGGGAAAGTATAGCATGAAACCAGAGGT TCTCAGAATGACTGTAAGATAGCTTACATTTCCTCTTTTTTGCCTTTATCTCCCCAACTAAAATACAATGGG

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3837/6881 FIGURE 3536

ATCCGAACACCGGGTGGCTGCTGCAGCCGAGGTCTTCGGGAATTCCAGCGAGGGTCTTATTGAATTTTCTGTGGG ${\tt GAAATTTAGATACTTCGAGCTCAATAGGCCCTTTCCAGAGGAAGCTATTTTGCATGATATTTCAAGCAATGTGAC}$ TTTTCTTATTTTCCAAATACACTCACAGTATCAGAATACAACTGTTTCCTTTTCTCCGACTCTCCTTTCCAATTC CTCGGAAACAGGCACTGCCAGTGGACTGGTTTTCATCCTTAGACCAGAGCAGAGTACATGCACTTGGTACTTGGG GACTTCAGGCATACAGCCTGTCCAGAATATGGCTATCCTACTCTCCTACTCAGAAAGAGATCCTGTCCCTGGAGG CTGTAATTTGGAGTTCGATTTAGATATTGATCCCCACATTACTTGGGAGTATAATTCCTTTGAAACGACTATCAA GTTTGCCCCAGCAAACCTAGGCTATGCGAGAGGCGTAGATCCCCCACCATGTGACGCTGGGACAGACCAGGACTC CAGGTGGAGGTTGCAGTATGATGTCTATCAGTATTTTCTGCCTGAGAATGACCTCACTGAGGAGATGTTGCTGAA GCATCTGCAGAGGATGGTCAGTGTGCCCCAGGTGAAGGCCAGTGCTCTCAAGGTGGTTACCCTAACAGCTAATGA TAAGACAAGTGTTTCCTTCTCCTCCCCCGGGACAAGGTGTCATATACAATGTCATTGTTTGGGACCCGTTTCT AAATACATCTGCTGCCTACATTCCTGCTCACACATACGCTTGCAGCTTTGAGGCAGGAGAGAGGGTAGTTGTGCTTC CCTAGGAAGAGTGTCTTCCAAAGTGTTCTTCACTCTTTTTGCCCTGCTTGGTTTCTTCATTTGTTTCTTTGGACA CAGATTCTGGAAAACAGAATTATTCTTCATAGGCTTTATCATCATGGGATTCTTCTTTATATATCTGATTACAAG ACTGACACCTATCAAGTATGATGTGAATCTGATTCTGACAGCTGTCACTGGAAGCGTCGGTGGAATGTTCTTGGT AGCTGTGTGGTGGCGATTTGGAATCCTCTCGATCTGCATGCTCTGTGTTGGACTAGTGCTGGGGGTTCCTCATCTC GTCAGTGACTTTCTTTACTCCACTGGGAAACCTAAAGATTTTTCATGATGATGGTGTATTCTGGGTCACTTTCTC TTGCATAGCTATCCTCATTCCAGTAGTTTTCATGGGCTGCCTAAGAATACTGAACATACTGACTTGTGGAGTCAT TGGCTCCTATTCGGTGGTTTTAGCCATTGACAGTTACTGGTCCACAAGCCTTTCCTACATCACTTTGAACGTACT CAAGAGAGCGCTCAACAAGGATTTCCACAGAGCTTTCACAAATGTGCCTTTTCAAACTAATGACTTCATTATCCT TCCCCACCCATACAAGTTATGGAAGCAAGAGAGAGAGCGCCGAGTGACAAACATTCTGGACCCTAGCTACCACAT ${\tt AGAGAACGCCTTTGCTTCTG} \underline{{\tt TAG}} {\tt ATGCCCAGGGGCTTTGGTCAGTGTCCTCAGCTTTGGAGTTCATGCCTGGA$ GCCCTTATTGATATATGGTAAGGGTGTACTAGGGGATTAGGATGATTGTAAGAGAATGAGAAAGATGACCAAAAG GTTGGTGGTAGGGAGGCTTTTTCTTATTTCCAAATACTTGAGAAATTACCTTTTGGTTTACAAATCTATGATCAA CTTATTCCATTAAATAGATACATTAAAAAAATTAAAAACTGATTCTTCTGCAGAGCACTGGTGTTTCTTTTATA ACAGTATTTGGAGATTTAGGGATTTGATACTTAGGCCTTTGAATTTTAGAATACAAAAAGAGAAGCCAGAC ATGGTGGCTCACACCTGTAATCCCAATACTGGGAAGCCAAGGTGGGAGTATCGCTTGAGCCCAGGAGTTTGAGAC CGACATGGGCAACATGACAAGACCCCATCTCTACAAAAAAATTAAAAAATTAGCCAGGCATGGTGGCACATGCCT ACTCCCAGCTCCCAAGGAGACTGAGATGGGAGGATCCCTGGAGCCCTGAAGATTGAGGCTACAGTGAGCCTTGAT TGTGTCACTGCACTCCAGCTTGGGTGACAGAGACCCTGTCTCGAGAAATT

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RRVTNILDPSYHIPPLRERLYGRLTQIKGLFQKEQPAGERTPLLL

AGACTATCTTTCTAGACAAGGCAGTTGAGGAGGAGGGGGGCCTTGAGGGGGACTGGCCTGGCGTGCACTCCGCAC CTCGGGGACATTATTGCGCGTGGAACGGCTGCTTTTGGAAGGCACAACTTCCTGAATGGACCATGACTCCCACCA AAGATCCCTGTCTCTGATTCACCAAACAGCTTCAACCCTGAAACCAGGACGAGAAGTTGACAACATCTGAGTGGA CAGCTAATTGACCTAAGACTTCAGACCAGACTATTGCCCAGAAGAAAAGATGTTTGGTTTTCACAAGCCAAAGAT GTACCGAAGTATAGAGGGCTGCTGTATTTGCAGAGCTAAGTCCTCCAGTTCTCGATTCACTGACAGTAAACGCTA TGAAAAGGACTTCCAGAGCTGTTTTGGATTGCATGAGACTCGTTCAGGAGACATCTGCAATGCCTGTGTCCTGCT CAGTCTAAAGACTACATTGAAACCAAAGAAAGTGAAAACTCTATCTGGGAACAGGATAAAAAAGCAACCAGATCAG TAAACTGCAGAAGGAATTTAAACGTCATAATTCTGATGCTCACAGTACCACCTCAAGTGCCTCCCCAGCTCAATC TCCTTGTTACAGTAACCAGTCAGATGACGGCTCAGATACAGAGATGGCTTCTGGTTCTAACAGAACACCAGTTTT TTCCTTTTTAGATCTCACTTACTGGAAAAGACAGAAGATATGTTGTGGGATCATCTATAAAGGCCGTTTTGGGGA AGTCCTCATTGACACATCTCTTCAAGCCTTGCTGCAGCAATAAGAAAGCAGCTGCTGAGAAGCCAGAGGAGCA TACCCAGGCTGGAGTGCAGTGGCGTGATCTTGGCTCACTGCAACTTCCGTCTCCCGGGTTCAAGTGATTCTCCTG CCTCAGCCTCCCAAGTAGCTGGGTTTATAGGTGCCCGCCACCAGACCCGGCTAATTTTTTAGTTTTAGTAGAGAC GGGGTTTCACCACGTTGGCCAGGCTGGTCTTAAATGACCCTCTTATTTTTAACTTGGATACCTGCTATTCTGCCA AAAGACAATTTCTAGAGTAGTTTTGAATGGGTTGATTTCCCCCACTCCCACAAACTCTGAAGCCAGTGTCTAGCT TACTAAAAAAGAGTTGTATATAATATTTAAGATGCTGAGTATTTCATAGGAAAGCTGAATGCTGCTGTAAAGTG TTTGTTGTATGATAAACTGTATGTAGTTTTTAGTCTTTCTGTTTTTGAGAAGCAGTGGTTGGGGCATTTTTAAGAT GGCTGGCTACTCTTGTTTTCCCTCATGATAATAAATTTGTCATAACTCAGTAACATGAACTTGCCCCTAGAGGTA GTTGTTAATAATTTTGAAATATTAAGGTCTTGCCAAGCTTCTGATGATTCACACCTGTACTACTGATTATTAAGC AGGACAGACTGAGCTTTCTGTTGCAAATACCTTGGAGGAGAAAGTAATTTCTAAATATACAGAGAGGTAACTTGA CTATATATGTTGCATCCTGTGCCTCCCTTCATATTAATATTTGATAAAGATTTTAATTTATGTAAAACTTCTAAA GCAGAATCAAAGCTCCTCTTGGGGAAATGGCAAGTCTTTAGGATAGGCAAGACCCTGTATGAATAGTACCAAAGC ATTACCGCATGGTAGAGAACACCTCGATTAAAAATGTTAAGCTATCTGAAAAATAAAATGTGCAAGTCTTCAGG ATGGCACAAAACAAAGGTTAATGCTTCTTGGGGCACATTTCTTAGAGGGCCTTGCTGAGTGTGTAAATATAATCGA $\tt CTTTTGTTTGTGTTACATGACTTCTGTGACTTCATTGAAAATCTGCACAATTCAGTTTCAGCTCTGGATTACTTCAGTTTACTTCAGTTTACATTCAGTTTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTTACATTCAGTTACATTCAGTTACATTCAGTTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTCAGTTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTACATTA$ AGTTGACCTTTGTGAAGGTTTTTATCTGTGTAGAATGGGTGTTTGACTTGTTTTAGCCTATTAAATTTTTATTTT CTTTCACTCTGTATTAAAAGTAAAACTTACTAAAAGAAAAGAGGTTTGTGTTCACATTAAATGGTTTTGGTTTGG CTTCTTTTAGTCAGGCTTTCTGAACATTGAGATATCCTGAACTTAGAGCTCTTCAATCCTAAGATTTTCATGAAA AGCCTCTCACTTGAACCCAAACCAGAGTACTCTTACTGCCTCTTTTCTAAATGTTCAGGAAAAGCATTGCCAGTT CAGTCTTTTCAAAATGAGGGAGAAACATTTGCCTGCCTTGTAATAACAAGACTCAGTGCTTATTTTTTAAACTGC ATTTTAAAAATTGGATAGTATAATAACAATAAGGAGTAAGCCACCTTTTATAGGCACCCTGTAGTTTTATAGTTC TTAATCTAAACATTTTATATTTCCTTCTTTTGGAAAAAACCTACATGCTACAAGCCACCATATGCACAGACTATA CAGTGAGTTGAGTTGGCTCTCCCACAGTCTTTGAGGTGAATTACAAAAGTCCAGCCATTATCATCCTCCTGAGTT ATTTGAAATGATTTTTTTTTGTACATTTTGGCTGCAGTATTGGTGGTAGAATATACTATAATATGGATCATCTCTA CTTCTGTATTTATTTATTACTAGACCTCAACCACAGTCTTCTTTTTCCCCTTCCACCTCTTTGCCTGTA GGATGTACTGTATGTAGTCATGCACTTTGTATTAATATATTAGAAATCTACAGATCTGTTTTGTACTTTTTATAC TGTTGGATACTTATAATCAAAACTTTTACTAGGGTATTGAATAAATCTAGTCTTACTAGAAAAATAAAA

3841/6881 FIGURE 3540A

 $\tt CTGAGGGGACCCGCCAGTTTCTAACTCAGTGGCGTTTGCCCTGATTCCCGGGGCCTGGCTTTCAGCGTAGCAATT$ GGGCAGACTGGTGAAATCGCAAACTGGGCGTCTGTTCCGGCGCCCGGACCCCTATTTGCAAAGGTCCATGGCTAAT GAAACACAGAAGGTTGGTGCCATCCATTTTCCTTTTCCCTTCACACCCTATTCCATCCAGGAAGACTTCATGGCA GAGCTGTACCGGGTTTTGGAGGCTGGCAAGATTGGGATATTTGAGAGTCCAACTGGCACTGGGAAGTCCTTAAGT CTTATTTGTGGGGCCCTCTCTTGGCTCCGTGACTTTGAACAGAAGAAGCGTGAAGAAGAGGCACGACTCCTTGAA ACTGGAACTGGCCCCTTACATGATGAGAAGATGAATCCCTGTGTCTTCTTCCTGCGAAGGGGCTGCAGGC ACCCCGAGGCCTGCTGGAGAACCGGCCTGGGTTACTCAGTTTGTGCAGAAGAAGAAGAAGAGGGACCTGGTGGAC CGACTAAAGGCGGAGCAGGCCAGGAGGAAGCAGCGAGAAGAACGCCTGCAGCAGCAGCAGCAGCAGGGTGCAGCTC AAGTATGCAGCCAAGCGCCTGAGGCAGGAAGAAGAAGAAGAAGAATCTCCTCCGCCTCAGCAGGGAGATGCTA GAGACAGGCCCGGAGGCTGAGCGGCTGGAGCAGCTGGAGTCTGGGGAGGAGGAGCTGGTCCTCGCCGAATACGAG AGTGATGAGGAGAAAAAGGTGGCGAGCAGAGTGGATGAGGATGACCTGGAGGAAGAACACATAACTAAG ATTTATTACTGTAGTCGGACACACTCCCAGCTGGCCCAGTTTGTGCATGAGGTGAAGAAGAGCCCCTTTGGCAAG GATGTTCGGCTGGTCTCCCTTGGCTCCCGGCAGAACCTTTGTGTAAATGAAGACGTGAAAAGCCTAGGTTCTGTG CAGCTTATCAACGACCGCTGTGTGGACATGCAGAGAAGCAGGCACGAGAAGAAGAAGGAGCTGAGGAGGAGAAGAAG CCAAAGAGGAGGAGGAGAAGCAGGCAGCCTGCCCCTTCTACAACCACGAGCAGATGGGCCTTCTCCGGGAT GAGGCCCTGGCAGAGGTGAAGGACATGGAGCAGCTGCTGGCCCTTGGGAAGGAGGCCCGGGCCTGTCCCTATTAC GGGAGCCGCCTTGCCATCCCTGCAGCCCAGCTGGTGGTGCTGCCCTATCAGATGCTGCTGCATGCGGCCACTCGG CAGGCCGCGGCATCCGGCTGCAGGACCAGGTGGTGATCATCGACGAGGCGCACAACCTGATCGACACCATCACG GGCATGCACAGCGTGGAGGTCAGCGGCTCCCAGCTCTGCCAGGCCCATTCCCAGCTGCTGCAGTACGTGGAGCGA TACGGGAAGCGTTTGAAGGCCAAGAACCTGATGTACCTGAAGCAGATCCTGTATTTGCTGGAGAAATTCGTGGCT AACGACTTTCTCTCCAGAGCCAGATCGACAACATCAACCTGTTCAAGGTGCAGCGATACTGTGAGAAGAGCATG ATCAGCAGAAAGCTCTTTGGATTCACTGAACGGTACGGAGCAGTGTTCTCATCCCGGGAGCAGCCCAAACTGGCT GGGTTTCAGCAATTCCTGCAGAGCCTGCAGCCCAGGACGACTGAAGCTCTTGCAGCCCCTGCAGACGAGAGTCAG GCCAGCACCCTGCGACCAGCTTCTCCACTGATGCACATCCAAGGCTTCCTGGCAGCTCTCACTACGGCCAACCAG GTGCACTTTGCCCAAGTGGTGAAGGAATGCCGGGCAGTGGTCATTGCGGGGGGTACCATGCAGCCGGTGTCTGAC $\tt TTCCGGCAGCAGCTGCTGGCCTGTGCCGGGGTGGAAGCTGAGCGCGTGGTGGAGTTTTCCTGTGGTCACGTGATC$ CCTCCAGACAACATCCTGCCCCTCGTCATCTGCAGCGGGATCTCCAACCAGCCGCTGGAATTCACGTTCCAGAAA AGAGACCTGCCTCAGATGATGGACGAGGTGGGTCGCATTCTCTGTAACCTGTGCGGTGTGGTTCCTGGAGGGGTG GTCTGTTTCTTCCCCTCCTACGAGTACCTGCGCCAGGTCCATGCCCACTGGGAGAAGGGTGGCCTGCTGGGCCGT CTGGCTGCCAGGAAGAAGATATTCCAGGAACCTAAGAGCGCACACCAGGTGGAGCAGGTGCTGCTGGCATATTCC AGGTGCATCCAGGCCTGTGGCCAGGAGAGAGGCCCAGGTGACAGGGGCCCTGCTCCTCTGTGGTTGGAGGAAAG ATGAGTGAAGGGATCAACTTCTCTGACAACCTAGGCCGGTGTGTGGTGATGGTGGGGCATGCCCTTCCCCAACATC AGGTCTGCAGAGCTGCAGGAGAAGATGGCCTACTTGGATCAAACCCTCAGCCCCCGGCCAGGCACCCCCAGGGAA TGCCAGCGTAGTGCTCCTGGACCAGCGATATGCCCGGCCCCTGTCCTGGCCAAGCTGCCGGCCTGGATCCGAGC CCGTGTGGAGGTCAAAGCTACCTTTGGCCCCGCCATTGCTGCTGTGCAGAAGTTTCACCGGGAGAAGTCGGCCTC GTGGGCGTGGTCTGCGGGGATCCTGTTACAAAGGTGAAACCCAGGAGGAGTGTGGAGTCCAGAGTGCTGCCAG $\tt CTTCCTGGTCTCCGCAGGAGGCTGTGGCAGCTGTGGCATCCACTGTGGCATCTCCGTCCTGCCCACCTTCTTAAGGCTTCCTGGCCACCTTCTTAAGGCTGTGGCATCTCCGTCCTGCCCACCTTCTTAAGGCTTCTGGCATCTCTGGCATCTCTGGCATCTCTGGCATCTCTGGCATCTCTGGCATCTCTGGCATCTCTGGCATCTCTGGCATCTGGCATCTCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCATCTGGCA$ AGGCGAGATGGAGCAGGCCCATCTGCCTCTGCCCTTTCTAGCCAAGGTTATAGCTGCCCTGGACTGCTCACTCTC TGCCAGTTCCTCCAAGTCTATGGCACCTCCCTCCCTCTCAACCACTTGAGCAAACTCCAAGACACCTTCTACCCC WO 2004/030615 PCT/US2003/028547

3842/6881 FIGURE 3540B

MANETQKVGAIHFPFPFTPYSIQEDFMAELYRVLEAGKIGIFESPTGTGKSLSLICGALSWLRDFEQKKREEEAR LLETGTGPLHDEKDESLCLSSSCEGAAGTPRPAGEPAWVTQFVQKKEERDLVNRLKAEQARRKQREERLQQLQHR VQLKYAAKRLRQEEERENLLRLSREMLETGPEAERPEQLESGEEELVLAEYESDEEKKVASRVDEDEDDLEEEH ITKIYHCSRTHSQLAQFVHEVKKSPFGKDVRLVSLGSRQNLCVNEDVRSLGSVQLINNRCVDMQRSRHEKKKGAE EEKPKRRRQEKQAACPFYNHEQMGLLRDEALAEVKDMEQLLALGKEARACPYYGSRLAIPAAQLVVLPYQMLLHA ATRQAAGIRLQDQVVIIDEAHNLIDTTTSMHSVEVSGSQLCQAHSQLLQYMERYGKRLKAKNLMYLKQILYLLEK FVAVLGGNIKQNPNTQSLSQTGMELKTINDFLFQSQIDNINLFKVQRYCEKSMISRKLFGFTERYGAVFSSREQP KLAGFQQFLQSLQPRTTEALAAPADESQASVPQPASPLMHIEGFLAALTTANQDGRVILSRQGSLSQSTLKFLLL NPAVHFAQVVKECRAVVIAGGTMQPVSNFRQQLLACAGVEAERVVEFSCGHVIPPDNILPLVICSGVSNQPLEFT FQKRDLPQMMDEVGRILCNLCGVVSGGVVCFFPSYEYLRQVHAHWEKGGLLGRLAARKKIFQEPKSAHQVEQVLL AYSRCGQACGQERGPVTGALLLSVVGGKMSEGINFSDNLGRCVVMVGMPFPNIRSAELQEKMAYLDQTLPRAPGQ AHPGKALVENLCMKAVNQSIGRAIRHQKDFASIVLLDQRYARPLCWPSCRPGSEPVWRSKLPLAPPLLLCRSFTG RSRPLPDGQPHHRPAPCPSFVLPSGDSVCRGRGLQGSCYKGETQEESVESRALPGPRHRR

 $\verb|CCTCCCCCTTTCCCAAGGACAATCTGCAAGAAAGCAGCGGCGGAGGAGAGCTAAGACTAAAAGAGTGGATCATG| \\$ ${\tt ACCCATGAAGAGCACCATGCAGCCAAAACCCTGGGGGATTGGCAAAGCCATTGCTGTTTAACCTCTGGTGGAGAT}$ ${\tt GCCCAAGGTATGAATGCTGTCAGGGCTGTGGTTCGAGTTGGTATCTTCACCGGTGCCCGTGTCTTCTTTGTC}$ $\verb|CTTCAGCTGGGAGGCACGGTGATTGGAAGTGCCCGGTGCAAGGACTTTCGGGAACGAGAAGGACGACTCCGAGCT|\\$ ${\tt GCCTACAACCTGGTGAAGCGTGGGATCACCAATCTCTGTGTCATTGGGGGTGATGGCAGCCTCACTGGGGCTGAC}$ ACCTTCCGTTCTGAGTGGAGTGACTTGTTGAGTGACCTCCAGAAAGCAGGTAAGATCACAGATGAGGAGGCTACG AAGTCCAGCTACCTGAACATTGTGGGCCTGGTTGGGTCAATTGACAATGACTTCTGTGGCACCGATATGACCATT GGCACTGACTCTGCCCTGCATCGGATCATGGAAATTGTAGATGCCATCACTACCACTGCCCAGAGCCACCAGAGG ACATTTGTGTTAGAAGTAATGGGCCGCCACTGTGGATACCTGGCCCTTGTCACCTCTGTCCTGTGGGGCCGAC TGGGTTTTTATTCCTGAATGTCCACCAGATGACGACTGGGAGGAACACCTTTGTCGCCGACTCAGCGAGACAAGG ACCCGTGGTTCTCGTCTCAACATCATCATTGTGGCTGAGGGTGCAATTGACAAGAATGGAAAACCAATCACCTCA ${\tt GAAGACATCAAGAATGTTCGTATGAATGAAGCCAGAGAGGCCTTAGAATCCATAGCCCATTCCCTTCTGGCTTCT}$ GAGTCTCCTGACATTGCTTCTCCCCTTGGTCCTTCTGCACATCTCTCCCTGGTTCCCTGCCCCTGATTGCCTCCC ACAAAGAACCATTACAAGACAAGAGGCTGAGCTGTCCATGGTTTACCCAAGTCTCTGCTTGTTTTCTTCCTTTGA CTCTGCGTAACCCTCTCTGTCCCTCTGTTGGTCCCTTCAGCTGGTGGTTAAGCGTCTGGGATATGACACCCGG GTTACTGTCTTGGGGCATGTGCAGAGGGGTGGGACGCCATCAGCCTTTGACAGAATTCTGGGCAGCAGGATGGGT GTGGAAGCAGTGATGCCACTTTTGGAGGGGACCCCAGATACCCCAGCCTGTGTAGTGAGCCTCTCTGGTAACCAG GCTGTGCGCCTGCCCCTCATGGAATGTGTCCAGGTG

MTHEEHHAAKTLGIGKAIAVLTSGGDAQGMNAAVRAVVRVGIFTGARVFFVHEGYQGLVDGGDHIKEATWESVSM MLQLGGTVIGSARCKDFREREGRLRAAYNLVKRGITNLCVIGGDGSLTGADTFRSEWSDLLSDLQKAGKITDEEA TKSSYLNIVGLVGSIDNDFCGTDMTIGTDSALHRIMEIVDAITTTAQSHQRTFVLEVMGRHCGYLALVTSLSCGA DWVFIPECPPDDDWEEHLCRRLSETRTRGSRLNIIIVAEGAIDKNGKPITSEDIKNVRMNEAREALESIAHSLLA SESPDIASPLGPSAHLSLVPCP

WO 2004/030615 PCT/US2003/028547

3847/6881 FIGURE 3545A

ACGCAGAGCGCTGCTGGGCTGCCGGGTCTCCCGCTTCCCCCTCCTGCTCCAAGGGCCTCCTGCATGAGGGCGCGG TAGAGACCCGGACCCGCGCGTGCTCCTGCCGTTTCGCTGCGCTCCGCCCGGGCCCGGCTCAGCCAGGCCCCGCG GTGAGCCATGATTCGCCTCGGGGCTCCCCAGACGCTGGTGCTGCTGACGCTGCTCGTCGCCGCTGTCCTTCGGTG TCAGGGCCAGGATGTCCGGCAACCAGGACCAAAGGGACAGAAAGGAGAACCTGGAGACATCAAGGATATTGTAGG ACCCAAAGGACCTCCTGGGCCTCAGGGACCTGCAGGGGAACAAGGACCCAGAGGGGATCGTGGTGACAAAGGTGA AAAAGGTGCCCCTGGACCTCGTGGCAGAGATGGAGAACCTGGGACCCCTGGAAATCCTGGCCCCCTGGTCCTCC TGGCGCCCAGTTGGGAGTAATGCAAGGACCAATGGGCCCCATGGGACCTCGAGGACCTCCAGGCCCTGCAGGTGC TCCTGGGCCTCAAGGATTTCAAGGCAATCCTGGTGAACCTGGTGAACCTGGTGTCTCTGGTCCCATGGGTCCCCG TGGTCCTCCTGGTCCCCCTGGAAAGCCTGGTGATGATGGTGAAGCTGGAAAACCTGGAAAAGCTGGTGAAAGGGG TCCGCCTGGTCCTCAGGGTGCTCGTGGTTTCCCAGGAACCCCAGGCCTTCCTGGTGTCAAAGGTCACAGAGGTTA TCCAGGCCTGGACGGTGCTAAGGGAGAGGCGGGTGCTCCTGGTGTGAAGGGTGAGAGTGGTTCCCCGGGTGAGAA TGCCCGAGGCAACGATGGTCAGCCAGGCCCCGCAGGGCCTCCGGGTCCTGTCGGTCCTGCTGGTCCTGGCTT CGGTGAACCTGGTACTCCTGGGTCCCCTGGGCCTGCTGGTGCCTCCGGTAACCCTGGAACAGATGGAATTCCTGG AGCCAAAGGATCTGCTGGTGCTCCTGGCATTGCTGGTGCTCCTGGCTTCCCTGGGCCACGGGGCCCTCCTGGCCC TCAAGGTGCAACTGGTCCTCTGGGCCCGAAAGGTCAGACGGGTGAACCTGGTATTGCTGGCTTCAAAGGTGAACA AGGCCCCAAGGGAGAACCTGGCCCTGCTGGCCCCCAGGGAGCCCCTGGACCCGCTGGTGAAGAAGGCAAGAGAGG TGCCCGTGGAGAGCCTGGTGGCGTTGGGCCCATCGGTCCCCCTGGAGAAAGAGGTGCTCCCGGCAACCGCGGTTT CCCAGGTCAAGATGGTCTGGCAGGTCCCAAGGGAGCCCCTGGAGAGCGAGGGCCCAGTGGTCTTGCTGGCCCCAA GGGAGCCAACGGTGACCCTGGCCGTCCTGGAGAACCTGGCCTTCCTGGAGCCCGGGGTCTCACTGGCCGCCCTGG TGATGCTGGTCCTCAAGGCAAAGTTGGCCCTTCTGGAGCCCCTGGTGAAGATGGTCGTCCTGGACCTCCAGGTCC TCAGGGGGCTCGTGGCCTGGTGTCATGGGTTTCCCTGGCCCCAAAGGTGCCAACGGTGAGCCTGGCAAAGG TGGTGAGAAGGGACTGCCTGGTGCTCCTGGTCTGAGGGGTCTTCCTGGCAAAGATGGTGAGACAGGTGCTGCAGG ACCCCTGGCCTGCTGGACCTGCTGGACGAGGCGAGCAGGGTGCTCCTGGGCCATCTGGGTTCCAGGGACT TCCTGGCCCTCCTGGTCCCCCAGGTGAAGGTGGAAAACCAGGTGACCAGGGTGTTCCCGGTGAAGCTGGAGCCCC TGGCCTCGTGGGTCCCAGGGGTGAACGAGGTTTCCCAGGTGAACGTGGCTCTCCCGGTGCCCAGGGCCTCCAGGG TCCCCGTGGCCTCCCCGGCACTCCTGGCACTGATGGTCCCAAAGGTGCATCTGGCCCAGCAGGCCCCCCTGGGGC TCAGGGCCCTCCAGGTCTTCAGGGAATGCCTGGCGAGAGGGGGAGCAGCTGGTATCGCTGGGCCCAAAGGCGACAG GGGTGACGTTGGTGAGAAAGGCCCTGAGGGAGCCCCTGGAAAGGATGGTGGACGAGGCCTGACAGGTCCCATTGG CCCCCTGGCCCAGCTGGTGCTAATGGCGAGAAGGGAGAAGTTGGACCTCCTGGTCCTGCAGGAAGTGCTGGTGC TCGTGGCGCTCCGGGTGAACGTGGAGAGACTGGGCCCCCCGGACCAGCGGGATTTGCTGGGCCTCCTGGTGCTGA CCCCTCTGGAGCACCTGGGCCTCAGGGTCCTACTGGAGTGACTGGTCCTAAAGGAGCCCGAGGTGCCCAAGGCCC CCCGGGAGCCACTGGATTCCCTGGAGCTGCTGGCCGCGTTGGACCCCCAGGCTCCAATGGCAACCCTGGACCCCC TGGTCCCCTGGTCCTTCTGGAAAAGATGGTCCCAAAGGTGCTCGAGGAGACAGCGGCCCCCCTGGCCGAGCTGG TGAACCCGGCCTCCAAGGTCCTGCTGGACCCCCTGGCGAGAAGGGAGAGCCTGGAGATGACGGTCCCTCTGGTGC CGAAGGTCCACCAGGTCCCAGGGTCTGGCTGGTCAGAGAGGCATCGTCGGTCTGCCTGGGCAACGTGGTGAGAG AGGATTCCCTGGCTTGCCTGGCCCGTCGGGTGAGCCCGGCAAGCAGGGTGCTCCTGGAGCATCTGGAGACAGAGG TCCTCCTGGCCCGTGGGTCCTCCTGGCCTGACGGGTCCTGCAGGTGAACCTGGACGAGAGGGAAGCCCCGGTGC TGATGGCCCCCTGGCAGAGATGGCGCTGCTGGAGTCAAGGGTGATCGTGGTGAGACTGGTGCTGTGGGAGCTCC TGCACAAGGCCCCATGGGACCCTCAGGACCAGCTGGAGCCCGGGGAATCCAGGGTCCTCAAGGCCCCAGAGGTGA CAAAGGAGAGGCTGGAGAGCCTGGCGAGAGAGGCCTGAAGGGACACCGTGGCTTCACTGGTCTGCAGGGTCTGCC CGGCCCTCCTGGTCCTTCTGGAGACCAAGGTGCTTCTGGTCCTGCTGGTCCTTCTGGCCCTAGAGGTCCTCCTGG ATCAGGCGAAACCGGCCTGCTGGTCCTCCTGGAAATCCTGGACCCCCTGGTCCTCCAGGTCCCCTGGCCCTGG

3848/6881 FIGURE 3545B

CCAGGCAGCCGGTGGCCTGAGACAGCATGACGCCGAGGTGGATGCCACACTCAAGTCCCTCAACAACCAGATTGA GAGCATCCGCAGCCCCGAGGGCTCCCGCAAGAACCCTGCTCGCACCTGCAGAGACCCTGAAACTCTGCCACCCTGA GTGGAAGAGTGGAGACTACTGGATTGACCCCAACCAAGGCTGCACCTTGGACGCCATGAAGGTTTTCTGCAACAT GGAGACTGGCGAGACTTGCGTCTACCCCAATCCAGCAAACGTTCCCAAGAAGAACTGGTGGAGCAGCAAGAGCAA GGAGAAGAAACACATCTGGTTTGGAGAAACCATCAATGGTGGCTTCCATTTCAGCTATGGAGATGACAATCTGGC TCCCAACACTGCCAACGTCCAGATGACCTTCCTACGCCTGCTGTCCACGAAGGCTCCCAGAACATCACCTACCA CTGCAAGAACAGCATTGCCTATCTGGACGAAGCAGCTGGCAACCTCAAGAAGGCCCTGCTCATCCAGGGCTCCAA TGACGTGGAGATCCGGGCAGAGGGCAATAGCAGGTTCACGTACACTGCCCTGAAGGATGGCTGCACGAAACATAC CGGTAAGTGGGGCAAGACTGTTATCGAGTACCGGTCACAGAAGACCTCACGCCTCCCCATCATTGACATTGCACC CATGGACATAGGAGGGCCCGAGCAGGAATTCGGTGTGGACATAGGGCCGGTCTGCTTCTTGTAAAAACCTGAACC CAGAAACAACACAATCCGTTGCAAACCCAAAGGACCCAAGTACTTTCCAATCTCAGTCACTCTAGGACTCTGCAC TGAATGGCTGACCTGACGTGTCCATTCATCCCACCCTCTCACAGTTCGGACTTTTCTCCCCTCTCTTTCTAA GGTCAAGGCAGAGGCAGGAAACTAACTGGTGTGAGTCAAATGCCCCCTGAGTGACTGCCCCCAGCCCAGGCCAGA AGACCTCCCTTCAGGTGCCGGGCGCAGGAACTGTGTGTCCTACACAATGGTGCTATTCTGTGTCAAACACCTC TGTATTTTTAAAACATCAATTGATATTAAAAATGAAAAGATTATTGGAAAGT

PCT/US2003/028547

3849/6881 FIGURE 3546

ATGAGCCACCACCGTCGGGCCTCCGGGCCGGCTTCAGCTCCACCTCATACCGCCGTACCTTCGGTCCACCGCCC TCACTATCCCCGGGGCCTTCTCCTACTCGTCCAGCTCCCGCTTCTCCAGCAGCCGCCTGCTGGGCTCCGCGTCC GAGCGCCTCGACTTCTCCATGGCCGAGGCCCTCAACCAGGAGTTCCTGGCCACGCGCAGCAACGAGAAGCAGGAG CTGCAGGAGCTCAACGACCGCTTCGCCAACTTCATCGAGAAGGTACGCTTTCTGGAGCAGCAGAACGCGGCCCTG CTGCGGCGAGAGCTGGAGCTGTTGGGCCGCGAGCGTGACCGGGTGCAGGTGGAGCGCGACGGGCTGGCGGAGGAC GAGTTCCTCAAGAAGCTGCACGAGGAGGAGCTGCGAGACCTGCAGGTGAGTGTGGAGAGCCAGCAGGTGCAGCAG GTGGAGGTGGAAGCCACGGTGAAGCCCGAGCTGACGGCAGCGCTGAGGGACATCCGCGCGCAGTACGAGAGCATC GCCGCGAAGAACCTGCAGGAGGGGGGGGGGGTGGTACAAGTCCAAGTACGCGGACCTGTCCGACGCTGCCAACCGG AACCACGAGGCCCTGCGCCAGGCCAAGCAGAGATGAACGAGTCCCGACGCCAGATCCAGAGTCTAACGTGCGAG GTGGACGGGCTGCGCGCACGAACGAGGCGCTGCTCAGGCAGTTGAGAGAGCTGGAGGAGCAGTTCGCCCTGGAG GCGGGGGGCTACCAGGCGGGCGCTGCGCGGCTCGAGGAGGAGCTGCGACAGCTAAAAGAGGAGATGGCGCGCAC $\tt CTGAGGGAGTACCAGGAGCTCCTCAACGTCAAGATGGCCCTGGACATCGAGATCGCCACCTACCGCAAGCTGCTG$ GAGGGCGAGGAGACCGGATCTCCGTGCCCGTCCATTCTTTTGCCTCCTTAAATATAAAGACGACTGTGCCTGAG GTGGAGCCTCCCCAGGACAGCCACAGCCGGAAGACGGTTCTGATCAAGACCATTGAGACCCGGAATGGGGAGGTG $\tt GTGACAGAGTCCCAGAAGGAGCAGCGCAGTGAGCTGGACAAGTCTTCTGCCCACAGTTAC\underline{TGA}ACCCCTTGGTCC$ GGAGCCTTGACTCTGCCCTAGGCCTGCTCAAAGCCCAAACCCTAAGACCACTCCTGAATTGTCTCCTCTCCTCTC GCATGTGTCTAAAAGGTGGTACCAGGCATCCCTTTCCTGGCTTATGGCCAAGCCCTACCCGGCCAGCAGTCGCTG GCCTCTCCCTGCCCTGACACTTGATGTGACCTATGTGCTTCCCTTTTCATGTCCCGATAAGAAGCCAATGATCCC CCCTCAGGACAAATCTACTCCAGCCACGATGAGAAGTGGGTGAGCCAGGGTCTGAGTTTCACATTTGAACCAAAT AAAATGCTGTCAAGAGAAAAA

MSHHPSGLRAGFSSTSYRRTFGPPPSLSPGAFSYSSSSRFSSSRLLGSASPSSSVRLGSFRSPRAGAGALLRLPS ERLDFSMAEALNQEFLATRSNEKQELQELNDRFANFIEKVRFLEQQNAALRGELSQARGQEPARADQLCQQELRE LRRELELLGRERDRVQVERDGLAEDLAALKQRLEEETRKREDAEHNLVLFRKDVDDATLSRLELERKIESLMDEI EFLKKLHEEELRDLQVSVESQQVQQVEVEATVKPELTAALRDIRAQYESIAAKNLQEAEEWYKSKYADLSDAANR NHEALRQAKQEMNESRRQIQSLTCEVDGLRGTNEALLRQLRELEEQFALEAGGYQAGAARLEEELRQLKEEMARH LREYQELLNVKMALDIEIATYRKLLEGEESRISVPVHSFASLNIKTTVPEVEPPQDSHSRKTVLIKTIETRNGEV VTESQKEQRSELDKSSAHSY

GTTTCTGTCGCAGGCTGCGAGGAAAGGCCCCTAGGCTGGGTCTGGGTGCTTGGCGGCGGCGGCTTCCTCCCCGCT CGTCCTCCCCGGGCCCAGAGGCACCTCGGCTTCAGTCATGCTGAGCAGGAGTATGGAAGCACCTGACTACGAAGTG CTATCCGTGCGAGAACAGCTATTCCACGAGAGGATCCGCGAGTGTATTATATCAACACTTCTGTTTGCAACACTG TACATCCTCTGCCACATCTTCCTGACCCGCTTCAAGAAGCCTGCTGAGTTCACCACAGTTTCATCCTACAAAATG GGCGTAACAATGTCTACCTACTCCATTGTGTGGACCAAAGGAGATGGTTAATGTGAAAGCCCTTTGTGAACCTGA AGTGAGCAACTGCTGGATGAATGTCATTACGGGCACAGGCTCTGTGTCATCTCCTCCTAGTGCTTCCACAGCC AGGACCAGAGACCTCCCTGATGACTGGGGAACCTGTGGATGATGAAGATGCCACCGTCAACAAGATTGCGCTCGA GCTGTGCACCTTTACCCTGGCAATTGCCCTGGGTGCTGTCCTGCTCCTGCCCTTCTCCATCATCAGCAATGAGGT GCTGCTCCCCTGCCTCGGAACTACTACATCCAGTGGCTCAACGGCTCCCTCATCCATGGCCTCTGGAACCTTGT TTTTCTCTCCCAACCTGTCCCTCATCTTCCTCATGCCCTTTGCATATTTCTTCACTGAGTCTGAGGGCTTTGC TGGCTCCAGAAAGGGTGTCCTGGGCCGGGTCTATGAGACAGTGGTGACGTTGATGCTCCTCACTCTGCTGGTGCT AGGTATGGTGTGGGCATCAGCCATTGTGGACAAGAACAAGGCCAACAGAGAGTCACTCTATGACTTTTGGGA TCTCGCCCGCATGTTCTCCGTCACTGGGAAGCTGCTAGTCAAGCCCCGGCTGCTGGAAGACCTGGAGGAGCAGCT CATGGAGCTGCTACACAGACAGGTCCTGGCTCTGCAGACACAGAGGGTCCTGCTGGAGAAGAGGCGGAAGGCTTC TGTGGCCATCCACATCCTGGAGCTGCTCATCGATGAGGCTGCCATGCCCCGAGTCATGCAGGGTACCTCCTTAGG CCAGGTCTCCTCCCAAGCTGGGCTCCTTTGGTGCCGTCATTCAGGTTGTACTCATCTTTTACCTAATGGTGTC CTCAGTTGTGGGCTTCTATAGCTCTCCACTCTTCCGGAGCCTGCGGCCCAGATGGCACGACACTGCCATGACGCA GATAATTGGGAACTGTGTCTCTCTGGTCCTAAGCTCAGCACTTCCTGTCTTCTCTCGAACCCTGGGGCTCAC AGCCTTTGCAGGCCTCACCACACTCTGTCTGGTGAAGACCTTCACTGCAGCTGTGCGGGCAGAGCTGATCCGGGC TCCAGCTGGGGGTGGGAAGGAAAAACTGGACACTGCCATCTGCTGCCTAGGCCTGGAGGGAAGCCCAAGGCTAC TTGGACCTCAGGACCTGGAATCTGAGAGGGTGGGTGGCAGAGGGGAGCAGAGCCATCTGCACTATTGCATAATCT GAGCCAGAGTTTGGGACCAGGACCTCCTGCTTTTCCATACTTAACTGTGGCCTCAGCATGGGGTAGGGCTGGGTG ACTGGGTCTAGCCCCTGATCCCAAATCTGTTTACACATCAATCTGCCTCACTGCTGTTCTGGGCCATCCCCATAG CCATGTTTACATGATTTGATGTGCAATAGGGTGGGGTAGGGGCAGGGAAAGGACTGGGCCAGGGCAGGCTCGGGA GATAGATTGTCTCCCTTGCCTCTGGCCCAGCAGAGCCTAAGCACTGTGCTATCCTGGAGGGGCTTTGGACCACCT GAAAGACCAAGGGGATAGGGAGGAGGAGGCTTCAGCCATCAGCAATAAAGTTGATCCCAGGGTTTGCTTTTTT

MVNVKALCEPEVSNCWMNVITGTGSVSSPLLVLPQPGPETSLMTGEPVDDEDATVNKIALELCTFTLAIALGAVL LLPFSIISNEVLLSLPRNYYIQWLNGSLIHGLWNLVFLFSNLSLIFLMPFAYFFTESEGFAGSRKGVLGRVYETV VTLMLLTLLVLGMVWVASAIVDKNKANRESLYDFWEYYLPYLYSCISFLGVLLLLVCTPLGLARMFSVTGKLLVK PRLLEDLEEQLYCSAFEEAALTRRICNPTSCWLPLDMELLHRQVLALQTQRVLLEKRRKASAWQRNLGYPLAMLC LLVLTGLSVLIVAIHILELLIDEAAMPRVMQGTSLGQVSFSKLGSFGAVIQVVLIFYLMVSSVVGFYSSPLFRSL RPRWHDTAMTQIIGNCVCLLVLSSALPVFSRTLGLTRFDLLGDFGRFNWLGNFYIVFLYNAAFAGLTTLCLVKTF TAAVRAELIRAFGLDRLPLPVSGFPQASRKTQHQ

GGAGGTGGGAAGTATCCCGGGCTGGGGGTGGGGGTACGCCGCACAGCTCCAGTCGCCGTCGCGGCTTCCGGTGCT AGGTGGAGGGAAGGAAGGAGCCGGGGAGTGGGCCAGGGCAGCCGGGCTGAAGTCGGCTTGGGGAGCCA GAGGGAGCGGAGCGGAACCTGCGGGGCAGAGGCGGCGGCGCAGCGGCGCAGCTGATAGCAGGAACAGGATCAAG TCTTCCATACCAGGGACCAGGCCAAAACCAGACTGCCACTGCCCCTACTTGGGCCCCACTGTCCCCAGAAAGCAG CTGCTGTGATCATGGGCAATATCTTTGGAAACCTTCTCAAGAGCCTGATTGGGAAGAAGGAGATGCGCATCCTGA TGGTGGGCCTGGATGCCGCAGGAAAGACCACCATCCTATACAAGCTGAAACTGGGGGAGATCGTCACCACCATCC ACAAGATTCGACCCCTCTGGAGACACTACTTCCAGAACACCCAAGGGTTGATATTTGTGGTCGACAGCAATGATC GGGAGCGAGTAAATGAGGCCCGGGAAGAGCTGATGAGAATGCTGGCGGAGGACGAGCTCCGGGATGCTGTACTCC TTGTCTTTGCAAACAAACAGGATCTGCCTAATGCTATGAACGCTGCTGAGATCACAGACAAGCTGGGCCTGCATT CCCTTCGTCACCGTAACTGGTACATTCAGGCCACCTGTGCCACCAGCGGGGACGGGCTGTACGAAGGCCTGGACT ACCTACTGTCACCCTGCCCCAGTCCTACCCCTTCCTCTCCATGCAAGTGTGGCCAGGGCCCTGGGTATCATGTCC ACATGCCCAGCAAGAGCCTTGCCTCCCTGCCTCCCTTTTTCCTGTCCACCTATATGACCAATCCCTAATT GCTGTCCTGATGATGAGTCATTCCAATTTACTGGATTTAAAACAAAAAGTTGTTACGGTTTCATGGGGTGGCCCC TGGCATCTGAGTCCTTTCCCTGTCCCCACAAGCCCTTCTACTCCCTGTTTGCCTTTTCCTTTGCCACCCTCTCCCT GTTTTACATGGAAATTGCACGGCCTCTCTGTGTTTGCGTGCATGTGTGCGCCTGTATATACATGTATAGAGAGA TGGAGCCTGTCATCTGCCCCTTCCGTGTTGGTGAGATTAAGGGAAGAAGGTGGGAGGGCATTAGTCAAGCCGGAC TCACCACCATTTTCCTTGTACTCTTCTCCACCCTTCTTAGGGCTGGAGGATGGCATTTATCTCTAGATGACTG GAGTGTTCAACTGATCCTTCCCCACCATCTTCAGATCTGTTCCTCTGGAGCTTGACTGGGGGGTGGGGATGGCAA GTCCATGGTGTGTGTTAGGGACCCAGGGCATTGGGGGGAAGGGCGAAGGCCTGAGGTTTTCCATCTTCATTCT CTTTTGTTATTAGGAGAGGTGAGGCATGGGCCAATCCCATTCCTGCCTTCCAGTGCCCCACCACCCTTCTGATC TTAGGGGTTGGATGGGTCATCTGTCCTTGGTCAGAATTTTCTCACCCTAGTACTCCTACTGGCCTGACCAGGGCT GACTGGGTATTCTAATGAGGAGCTGGGAAGTGGGGTGACATAGCTGACCTTAGTATCAACCCCCCTCTTCTCCAA CTCTTGTTTTCTAGTCCAGGATATGCTAAAGGACGAAGATTTTCTATTGTTTCCAGGCCCTCAGACCATCCTTGC TGTCCCTTCACCCTCCATGCCCTGCCATCCTCACTCACTTCTCATAAATGGATCTGGGGGTTAGAGTGGAGGAA ATAAAATCCTGAAGTGGTTGTCAGTGCTTGTGGGATGCAGTGGTCTTCAGGATTCTCCCCGCATTATTATGTAGT TGTTCAGAAGCTGTTGCTACTGCGTCTCTCTGTCTGCAGGGGGCACTTGTTCCTGAGGTCCTCGCCTGGGTCCTG AGCTGCCCATAACCTGCTAAGGTCAGGGCCCAGGGCCCCCACAGCATGGCTGAGGGACCCCTTCCCAGTAGGGC TGTCCCAAGCCCCACTCCATGGGGCCAGGTTTCCTGGCCACTTTTGTTGATAGCAGATGGATCAATATTAGTAAC CCCATCCAAGATTGAACTGTGAAAGAGAGGTTCCAGGGGTATCTCCCTCAGTGCCAGTTACTTAGTGATGTTTA GTGTGGGTGTTTTGTGTGTGGTGGTGGTGGGGGGGGTGTTGGAGGTTCTATTTCATTTAAAAATGTATTCATTT TGCCTCTCCTTGAACTCTTTCCTTTTCAATCTCAACTCATTCACTGCTGTTGCTCATTTGCCCTTTTCCAT GTATTTTTCCTACTTAGGATTTTCCACTCTATCTTTGTGGTTCATGAGGACTTTGCCTCTTCTCCTGCCTCATT CCCTGACTTTCTCTAGTTAGATGTCAGTCCTAAATAGGTTTTCCTCACTTCAGGCCTCACCCTCACCTTGTTTT TTTGGGGGCTCCAGGGACCAATCTGGGGCTGGAAATGTTAGGAGGTTGCCTTGGTGCTGCCCCAGATCTGTCCAG CAGGGGGCAGTAAGTGATCTTGGTAGTATCCCTGGCTGCTAAGCCCTTGGCAGGGGTGGTCCTTTCTACATTCCC GGTTTAATTTTATGCTTTCCCTGATTCCAGCTTTCTGCTTCCTGAGGACTCCCGCTCCCCCCACCCCAAAGTTTG TCTGTGGTGTTATAGTGGTAACTGCAGTTCCTCCTCTGGAATGTAGACTGTATATGTTTAATAACTCACCTTCTC TATCCTTGCTCAAAATGTGGGATAACGCGATGACTGTGACCCTGGTTGGAAATTAAACTTGTTTTATGCA

 ${\tt MGNIFGNLLKSLIGKKEMRILMVGLDAAGKTTILYKLKLGEIVTTIPTIGFNVETVEYKNISFTVWDVGGQDKIR} \\ {\tt PLWRHYFQNTQGLIFVVDSNDRERVNEAREELMRMLAEDELRDAVLLVFANKQDLPNAMNAAEITDKLGLHSLRH} \\ {\tt RNWYIQATCATSGDGLYEGLDWLANQLKNKK} \\ {\tt MGNIFGNLKSLIGKKEMRILMVGLKNKK} \\ {\tt MGNIFGNLKSLIGKKEMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKNKKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGLKMRILMVGL$

3855/6881 FIGURE 3552

GAGGATCACTCCAGTGCCCAGGTCTCAGGAACCTCTGTCTTGTGCATTCACTCATCGTCCATGCTCTCACCCTCG TCTGGAGGGGCAGGAGTTTTGCATTAAGCATATCCTTGAAGACAAGAATGCACCCTTCAAGCAGTGTAGTTATAT ATCGACGAAGAATGGAAAAAGATGTCCCAATGCTGCCCCAAAGCCAGAGAAGAAGATGGGGTGTCCTTCTGTGC TGAACATGTCCGTAGGAATGCCCTGGCACTTCATGCTCAAATGAAGAAGACCAACCTAGGGCCTGTGGGTGAAAC ACTCCTGTGCCAGCTGAGCTCATATGCTAAGACAGAGCTGGGGTCTCAGACTCCAGAAAGTAGTCGCAGTGAAGC CAGCCGAATACTAGACATGCTGGTGTCTACACAGCAGAAGAAGTGGCCCTGATT<u>ATG</u>CGTGAAAAGCTAATTCGT TTGCAGTCGTTGTATATTGATCAGTTTAAACGACTTCAGCATCTGCTCAAGGAGAAGAAGCGCCGATACTTACAT AATCGCAAAGTGGAACATGAAGCTCTAGGCAGTAGTCTCCTGACTGGCCCAGAGGGACTTTTGGCCAAAGAACGA GAGAACTTAAAGCGATTAAAATGTCTGCGACGATACCGCCAGCGCTATGGAGTGGAAGCCTTACTGCATAGGCAG TTGAAGGAACGGAGAATGCTGGCCACAGATGGTGCCCCAACAGGCCCATACCACTCGTTCCAGTCAGAGGTGC TTGGCCTTTGTGGATGATGTTCGTTGTTCCAATCAGTCTCTTCCAATGACCAGACACTGCCTTACCCAGAAAGAT ${\tt GCGACTGCCATTGGTGACCTGTTAACTCTTTACTGTGGTCTAATGGAGACAGCACTCGAC{\tt TGA} {\tt AGGTGAAGGACC}$ CAGACTCTAGTTGACTTGGATGTTGTGGGTGATGGTATGCAGTGTCCTCCTTCACCTTTGCTTTTTGATCCTTCA CTAACCCTTGAAGATCATTTAGTCAAAGAAATTGCTGAAGACACAGTGGATATTTTTGGGCCAGATGCAGATGGCT ${\tt GGAGATGGGTGCAGATCCCAGGGATCTCGAAATTCTGAGAAAGCCTCTGCACCATTGTCTCAGAGTGGATTGGCT}$ ACTGCAAATGGGAAGCCAGAACCCACTTCTATTAGTTGATAGTTTTGGGGGAACCATTTTACTTTGGTGGATTTAAA TTTCTCGTTCTTCAAAGAAGTATTTCTGATCATCTCTCACAAAACACAGGCAACCCAGACTACCTTGTTTTTCTT $\tt CTGGATTGAGTATTATAGTCAAACGTAAAGCCAAATTTTGAGGACGTGGACCGTGGGTTTCTTCCCACTCAGGGC$ AAGGAAGAGAAAGAGATAATCCCTATCAAAGCTTCTGGGATCATTTGGGACTATACCTAAAAGGAAAGTGACA TCTTTGTAATGGGATTTCCCAAGTCATGGATAGAAATCCACTTAAGTAGCTAGGTGGGAGCTGTCTTTGTGAGTG GTGTCTTTGAGATACTGATGGCCCTAATATCGGTTATCTCTATCTGAAGACCTGCAGTTTAGCTTTTCTTCACCT CTACTTAATTGGGCAGTCTTTAACCCCTTTCCCTGGTGAACTCTGGCTTTTTATCCTCTGAGAAAACAGCCCACA GGACTGGGTCCTCCTTATCCGTCTTGCTTTTAACCTATGTAAATTTCTGTGGTTGCTATCTTATGTAAAATATAG TAAAAATTTATTGTATATAGTTTCTATTAAATGTTAAAGAAAATGTTATGAAAATATCAAACAGTCACCTGAATT **GAATGCAAAAAAAAAAAAAAAA**

3856/6881 FIGURE 3553

MREKLIRLQSLYIDQFKRLQHLLKEKKRRYLHNRKVEHEALGSSLLTGPEGLLAKERENLKRLKCLRRYRQRYGV EALLHRQLKERRMLATDGAAQQAHTTRSSQRCLAFVDDVRCSNQSLPMTRHCLTQKDATAIGDLLTLYCGLMETA

3857/6881 FIGURE 3554A

GGGAGCCCAGGGGCCCAATGAGGCAGTGCCCCAGTGAGGACCTATCACAGATTGGTTTCCCTGAGGGCCTTACA CCTGCCCACCTAGGAGAACCTGGAGGGTCCTGCTGGGCTCACCATTGGTGTGCTGCATGGTCGGCAGGCGTATGG GGGCAGGAGGGCCCAGAACTATGTGGTGTGGACAAGGCCATCTTCTCAGGGATCTCACAGCGCTGCTCCCACTGC ACCAGGCTCGGTGCCTCCATCCCTTGCCGCTCACCTGGATGTCCACGGCTTTACCACTTCCCCTGCGCGACTGCC AGCGGTTCCTTCCTATCCATGAAAACACTGCAGCTGCTATGCCCAGAGCACAGTGAGGGGGGCTGCATATCTGGAG GAGGCTCGCTGTGCAGTGTGTGAGGGGCCAGGGGAGTTGTGTGACCTGTTCTTCTGTACCAGCTGTGGGCATCAC TGCCAAGCCTGCAGGAAACCTGGGAATGACTCTAAGATGTTGGTTTGTGAGACGTGTGACAAAGGATACCATACT TTCTGCCTAAAACCACCCATGGAGGAACTGCCTGCTCACTCTTGGAAGTGCAAGGCGTGCCGGGTGTGCCGGGCC ${\tt AAAGCCCAGGGAGGTCAGACTATCCGCTCCGTTGCTGAGCAGCATACCCCGGTGTGTAGCAGATTTTCACCCCCA}$ GAGCCTGGCGATACCCCCACTGACGAGCCCGATGCTCTGTACGTTGCATGCCAAGGGCAGCCAAAGGGTGGGCAC GTGACCTCTATGCAACCCAAGGAACCAGGGCCCCTGCAATGTGAAGCCAAACCACTAGGGAAAGCAGGGGTCCAA CTTGAGCCCCAGTTGGAGGCCCCCTAAACGAGGAGATGCCACTGCTGCCCCCACCTGAGGAGTCACCCCTGTCC ${\tt CCACCACCTGAGGAATCACCCACGTCCCCACCACCTGAGGCATCACGCCTGTCACCACCTGAGGAATTGCCC}$ GCATCCCCACTTCCTGAGGCATTGCACCTGTCCCGGCCGCTGGAGGAATCGCCCCTCTCTCCCGCCGCCTGAGGAG TCTCCTCTGTCTCCCCCACCTGAATCATCACCTTTTTCTCCACTGGAGGAGTCGCCCTTGTCTCCACCGGAAGAG TCACCCCCATCTCCTGCACTTGAGACGCCTCTATCCCCACCACCTGAAGCATCGCCCCTGTCCCCACCATTTGAA GAATCTCCTTTGTCCCCGCCACCTGAGGAATTGCCCACTTCCCCGCCACCTGAAGCATCTCGCCTGTCTCCACCA CCTGAGGAGTCACCCATGTCCCCTCCACCTGAAGAGTCACCCATGTCTCCACCACCGGAGGCATCTCGTCTGTTC CCACCATTTGAAGAGTCTCCTCTGTCCCCTCCACCTGAGGAGTCTCCCCTTTCCCCACCACCTGAGGCATCACGC CTGTCCCCACCTGAGGACTCGCCTATGTCCCCACCACCTGAAGAATCACCTATGTCCCCCCCACCTGAGGTA TCGCGCCTATCCCCCTGCCTGTGTGTCACGCCTGTCTCCACCGCCTGAGGAATCTCCCTTGTCCCCACCGGCC CCCATCCTGGAGACACCCATCAGCCCTCCACCAGAAGCTAACTGCACTGACCCTGAGCCTGTCCCCCCTATGATC CTTCCCCCATCTCCAGGCTCCCCAGTGGGGCCGGCTTCTCCCATCCTGATGGAGCCCCTTCCTCAGTGTTCG CCACTCCTTCAGCATTCCCTGGTTCCCCAAAACTCCCCTCCTTCCCAGTGCTCTCCTCCTGCCCTACCACTGTCC GTTCCCTCCCGTTGAGTCCCATAGGGAAGGTAGTGGGGGTCTCAGATGAGGCTGAGCTGCACGAGATGGAGACT GAGAAAGTTTCAGAACCTGAATGCCCAGCCTTGGAACCCAGTGCCACCAGTCCTCCCCTTCCCCAATGGGGGAC CTTTCCTGCCCCGCCCCAGCCCTGCCCCAGCCCTGGATGACTTCTCTGGCCTAGGGGAAGACACAGCCCCTCTG GATGGGATTGATGCTCCGGGTTCACAGCCAGAGCCTGGACAGACCCCTGGCAGTTTGGCTAGTGAACTTAAAGGC TCCCCTGTGCTCCTGGACCCCGAGGAGCTGGCCCCTGTGACCCCTATGGAGGTCTACCCCGAATGCAAGCAGACA GCAGGGCAGGGCTCACCATGTGAAGAACAGGAAGAGCCACGTGCACCGGTGGCCCCCACACCACCCCACTCTCATC AAATCCGACATCGTTAACGAGATCTCTAATCTGAGCCAGGGTGATGCCAGTGCCAGTTTTCCTGGCTCAGAGCCC CTCCTGGGCTCTCCAGACCCGGAGGGGGGTGGCTCCCTGTCCATGGAGTTGGGGGTCTCTACGGATGTTAGTCCA GCCCGAGATGAGGGCTCCCTACGGCTCTGTACTGACTCACTGCCAGAGACTGATGACTCACTATTGTGCGATGCT AAACAGGGTCGCAGCAGCAGTTTCCCAGGAAGACGCCGGCCTCGTGGAGGAGCCCATGGAGGACGTGGTAGAGGA CGGGCCCGGCTAAAGTCAACTGCTTCTTCCATTGAGACTCTGGTAGTTGCTGACATTGATAGCTCTCCCAGTAAG ATGCAGGACATGTGTGTGTGTGTGGCAGCTTTGGCCGGGGGGCAGAGGGCCACCTCCTTGCCTGTTCGCAGTGC TCTCAGTGCTATCACCCTTACTGTGTCAACAGCAAGATCACCAAGGTGATGCTGCTCAAGGGCTGGCGTTGTGTG GAGTGTATTGTGTGAGGTGTGGCCAGGCCTCCGACCCCTCACGCCTGCTGCTCTGTGATGACTGTGATATT AGCTACCACACATACTGCCTGGACCCCCACTGCTCACCGTCCCCAAGGGCGGCTGGAAGTGCAAGTGGTGTGT

3858/6881 FIGURE 3554B

TGTGCCAGCCTGGTGACCTGCCCTATCTGTCATGCTCCTTACGTAGAAGAGGACCTACTAATCCAGTGCCGCCAC TTTGACTGTGTCTCCTGCCAGCCCTACGTGGTAAAGCCTGTGGCGCCTGTTGCACCTCCAGAGCTGGTGCCCATG AAGGTGAAAGAGCCAGAGCCCCAGTACTTTCGCTTCGAAGGTGTGTGGCTGACAGAAACTGGCATGGCCTTGCTG CGTAACCTGACCATGTCACCACTGCACAAGCGGCGCCCAACGGCGAGGACGGCTTGGCCTCCCAGGCGAGGCAGGA TTGGAGGGTTCTGAGCCCTCAGATGCCCTTGGCCCTGATGACAAGAAGGATGGGGACCTGGACACCGATGAGCTG CTCAAGGGTGAAGGTGGTGGAGCACATGGAGTGCGAAATTAAACTGGAGGCCCCGTCAGCCCTGATGTGGAG CCTGGCAAAGAGGAGACCGAGGAAAGCAAAAAACGCAAGCGTAAACCATATCGGCCTGGCATTGGTGGTTTCATG GTGCGACAGCGGAAATCCCACACACGCACGAAAAAGGGGGCCTGCTGCACAGGCGGAGGTGTTGAGTGGGGATGGG CAGCCCGACGAGGTGATACCTGCTGACCTGCCAGAGGGCGCCGTGGAGCAGAGCTTAGCTGAAGGGGATGAG AAGAAGAACAACAGCGGCGAGGGCGCAAGAAGAGCCAAACTGGAGGACATGTTCCCTGCTTACTTGCAGGAAGCC GGTCCAGATATTGCAGATGAAGAATCCCGTGGCCTCGAGGGCAAAGCCGATACACCAGGACCTGAGGATGGGGGC GTGAAGGCATCCCCAGTGCCCAGTGACCCTGAGAAGCCAGGCACCCCAGGTGAAGGGATGCTTAGCTCTGACTTA GACAGGATTTCCACAGAAGAACTGCCCAAGATGGAATCCAAGGACCTGCAGCAGCTCTTCAAGGATGTTCTGGGC TCTGAACGAGAACAGCATCTGGGTTGTGGAACCCCTGGCCTAGAAGGCAGCCGTACGCCACTGCAGAGGCCCTTT CTTCAAGGTGGACTCCCTTTGGGCAATCTGCCCTCCAGCAGCCCAATGGACTCCTACCCAGGCCTCTGCCAGTCC CCGTTCCTGGATTCTAGGGAGCGCGGGGGCTTCTTTAGCCCGGAACCCGGTGAGCCCGACAGCCCCTGGACGGC TCAGGTGGCACCACGCCCTCCACCCCCACACCCCACCACGGAGGGTGAGGGCGACGGACTCTCCTATAACCAG CGGAGTCTTCAGCGCTGGGAGAAGGATGAGGAGTTGGGCCAGCTGTCCACCATCTCACCTGTGCTCTATGCCAAC AAGGTTCCAGCAGCTGACAAAGCCCCCTACCTGCAAAAGGCCAAAGATAACCGGGCAGCTCACCGCATCAACAAG ATTGGCAGCCCACTACCCCGGCGGCTTGTCTACCTCTGCGGACGGGTTCCTGAAGCCGCCGGCGGGCTCGGTG CCTGGCCCTGACTCGCCTGGTGAGCTCTTCCTCAAGCTCCCACCCCAGGTGCCCGAAGTGCCTTCGCAGGAC CCCTTTGGACTGGCCCTGCCTATCCCCTGGAGCCCCGCTTCCCCACGGCACCGCCCACCTATCCCCCCTATCCT TTCCACACTACCCCACCTGGCACCCCAGACACCAGCCCTCCACACCTGACCCATTCCTCAAACCCCGCTGCCCC TCGCTGGATAACTTGGCTGTGCCTGAGAGCCCTGGGGTAGGGGGAGGCAAAGCTTCCGAGCCCCTGCTCTCGCCC GTCTTCAAAGCCCCCTGACCCCTCGGGCATCTCAGGTAGAGCCCCAGAGCCCGGGCTTGGGCCTAAGGCCCCAG GAGCCACCCCTGCCCAGGCTTTGGCACCTTCTCCTCCAAGTCACCCAGACATCTTTCGCCCTGGCTCCTACACT GACCCATATGCTCAGCCCCCATTGACTCCTCGGCCCCAACCTCCGCCCCTGAGAGCTGCTGTGCTCTGCCCCCT CGCTCACTGCCCTCCGACCCTTTCTCCCGAGTGCCTGCCAGTCCTCAGTCCCAGTCCCAGTCCCAGTCTCCACTG ACACCCCGGCCTCTGTCTGCTGAAGCTTTTTGCCCCATCACCCGTTACCCCTCGCTTCCAGTCCCCTGACCCTTAT TCTCGCCCACCCTCACGCCCTCAGTCCCGTGACCCATTTGCCCCATTGCATAAGCCACCCCGACCCCAGCCCCCT GAAGTTGCCTTTAAGGCTGGGTCTCTAGCCCACACTTCGCTGGGGGGCTGGGGAGTTCCCAGCAGCCCTGCCCGCG GGGCCAGCAGGTGAGCTCCATGCCAAGGTCCCAAGTGGGCAGCCCCCCAATTTTGTCCGGTCCCCTGGGACGGGT GCATTTGTGGGCACCCCCTCTCCCATGCGTTTCACTTTCCCTCAGGCAGTAGGGGAGCCTTCCCTAAAGCCCCCT GTCCCTCAGCCTGGTCTCCCGCCACCCCATGGGATCAACAGCCATTTTGGGCCCGGCCCCACCTTGGGCAAGCCT CAAAGCACAAACTACACAGTAGCCACAGGGAACTTCCACCCATCGGGCAGCCCCCTGGGGCCCAGCAGCGGGTCC ACAGGGGAGAGCTATGGGCTGTCCCCACTACGCCCTCCGTCGGTTCTGCCACCACCTGCACCCGACGGATCCCTC CCCTACCTGTCCCATGGAGCCTCACAGCGATCAGGCATCCCTCTCCTGTCGAAAAGCGAGAAGACCCAGGGACT GGAATGGGTAGCTCTTTGGCGACAGCTGAACTCCCAGGTACCCAGGACCCAGGCATGTCCGGCCTTAGCCAAACA

3859/6881 FIGURE 3554C

GAGCTGGAGAAGCAACGGCAGCGCCAGCGACTACGAGAGCTGCTGATTCGGCAGCAGATCCAGCGCAACACCCTG $\tt CGGCAGGAGAAGGAAACAGCTGCAGCAGCTGCAGGAGCAGTGGGGCCTCCAGGCAGCTGGGGTGCTGAGCCCAGC$ AGCCCTGCCTTTGAGCAGCTGAGTCGAGGCCAGACCCCCTTTGCTGGGACACAGGACAAGAGCAGCCTTGTGGGG TTGCCCCCAAGCAAGCTGAGTGGCCCCATCCTGGGGCCAGGGTCCTTCCCTAGCGATGACCGACTCTCCCGGCCA CCTCCACCAGCCACGCCTTCCTCTATGGATGTGAACAGCCGGCAACTGGTAGGAGGCTCCCAAGCTTTCTATCAG CGAGCACCCTATCCTGGGTCCCTGCCCTTACAGCAGCAACAGCAACAACTGTGGCAGCAACAACAGCAACAGCA GCAACCTCCATGCGATTTGCCATGTCAGCTCGCTTTCCATCAACTCCTGGACCTGAACTTGGCCGCCAAGCCCTA GGTTCCCCGTTGGCGGGAATTTCCACCCGTCTGCCAGGCCCTGGTGAGCCAGTGCCTGGTCCAGCTGGTCCTGCC CCTCAGAGACCCCGTTTTTACCCTGTAAGTGAGGACCCCCACCGACTGGCTCCTGAAGGGCTTCGGGGCCTGGCG GTATCAGGTCTTCCCCCACAGAAACCCTCAGCCCCACCGGCCCCTGAATTGAACAACAGTCTTCATCCAACACCC CACACCAAGGGTCCTACCCTGCCAACTGGTTTGGAGCTGGTCAACCGGCCCCCGTCGAGCACTGAGCTTGGCCGC $\tt CCCAATCCTCTGGCCCTGGAAGCTGGGAAGTTGCCCTGTGAGGATCCCGAGCTGGATGACGATTTTGATGCCCAC$ AAGGCCCTAGAGGATGATGAAGAGCTTGCTCACCTGGGTCTGGGTGTGGATGTGGCCAAGGGTGATGATGAACTT GGCACCTTAGAAAACCTGGAGACCAATGACCCCCACTTGGATGACCTGCTCAATGGAGACGAGTTTGACCTGCTG GCATATACTGATCCTGAGCTGGACACTGGGGACAAGAAGGATATCTTCAATGAGCACCTGAGGCTGGTAGAATCG GCTAATGAGAAGGCTGAACGGGAGGCCCTGCTGCGGGGGGTGGAGCCAGGACCCTTGGGCCCTGAGGAGCGCCCT CCCCCTGCTGCTGATGCCTCTGAACCCCGCCTGGCATCTGTGCTCCCTGAGGTGAAGCCCAAGGTGGAGGAGGGT GGACGCCACCTTCTCCTTGCCAATTCACCATTGCTACCCCCAAGGTAGAGCCCGCACCTGCTGCCAATTCCCTT GGCCTGGGGCTAAAGCCAGGACAGAGCATGATGGGCAGCCGGGATACCCGGATGGGCACAGGGCCATTTTCTAGC AGTGGGCACACGCTGAGAAGGCCTCCTTTGGGGCCACGGGAGGACCACCAGCTCACCTGCTGACCCCCAGCCCA CTGAGTGGCCCAGGAGGATCCTCCCTGCTGGAAAAGTTTGAGCTCGAGAGTGGGGCTTTGACCTTGCCTGGTGGA CCTGCAGCATCTGGGGATGAGCTAGACAAGATGGAGAGCTCACTGGTAGCCAGCGAGTTACCCCTGCTCATTGAG GACCTGTTGGAGCATGAGAAGAAGGAGCTGCAGAAGAAGCAGCAGCTTTCAGCACAGTTGCAGCCTGCCCAGCAG CAGCAGCAACAGCAGCAGCATTCCCTACTGTCTGCACCAGGCCCTGCCCAGGCCATGTCTTTGCCACATGAG GGCTCTTCTCCCAGTTTGGCTGGGTCCCAACAGCAGCTTTCCCTGGGTCTTGCAGGTGCCCGACAGCCAGGTTTG GTGCTATCACAGAAGCCCATGGGCACCATGCCACCTTCCATGTGCATGAAGCCGCAGCAATTGGCAATGCAGCAG CAGCTGGCAAACAGCTTCTTCCCAGATACAGACCTGGACAAATTTGCTGCAGAAGATATCATTGATCCCATTGCA AAGGCCAAGATGGTGGCTTTGAAAGGCATCAAGAAAGTGATGGCTCAGGGCAGCATTGGGGTGGCACCTGGTATG AACAGACAGCAAGTGTCTCTGCTAGCCCAGAGGCTCTCGGGGGGACCTAGCAGTGATCTGCAGAACCATGTGGCA GTGATCAATGAAGCTGACCAGCGGCAGTATGAGGAGTGGCTGTTCCATACCCAGCAGCTCCTACAGATGCAGCTG AAGGTGCTAGAGGAGCAGATTGGTGTACACCGCAAGTCCCGGAAGGCTCTGTGTGCCAAGCAGCGCACTGCCAAA AAAGCTGGCCGTGAGTTCCCAGAAGCTGATGCTGAGAAGCTCAAGCTGGTTACAGAGCAGCAGAGCAAGATCCAG AAACAACTGGATCAGGTCCGGAAACAGCAGAAGGAGCACACTAATCTCATGGCAGAATATCGGAACAAGCAGCAG CAACAACAGCAGCAGCAGCAACAACAGCAACAGCACTCAGCTGTGCTGGCTCTCAGCCCTTCCCAGAGTCCC CGGCTGCTCACCAAGCTCCCTGGTCAGCTGCTCCCTGGCCATGGGCTGCAGCCACCACAGGGGCCTCCGGGTGGG CCTGGCAACCTTGCTCTTCGAAGCCTCGGACCTGATTCAAGGCTTTTACAGGAAAGGCAGCTGCAGCTGCAGCAG CAACGTATGCAGCTGGCCCAGAAACTGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCACCTTCTAGGACAG GTGGCAATCCAGCAGCAACAGCAGCAGGGTCCTGGAGTACAGACAAACCAAGCTCTGGGTCCCAAGCCCCAGGGC CTTATGCCTCCCAGCAGCCACCAAGGCCTCCTGGTCCAGCAGCTGTCCCCTCAACCACCCCAGGGGCCCCAGGGC ATGCTGGGCCCTGCCCAGGTGGCTGTTGTTGCAGCAGCACCCTGGAGCTTTTGGGCCCCCAGGGCCCTCACAGA CAGGTGCTTATGACCCAGTCCCGGGTGCTCAGTTCCCCCCAGCTGGCACAGCAGGGTCAGGGCCTTATGGGACAC AGGCTGGTCACAGCCCAGCAGCAGCAGCAACAACACCCCAACAGCACGGTCCATGGCAGGGCTGTCCCAT

3860/6881 FIGURE 3554D

 $\tt CTTCAGCAGAGTCTGATGTCACACAGTGGGCAGCCCAAACTGAGCGCTCAGCCCATGGGCTCTTTACAGCAGCTT$ CAGCAGCAGCAGCAGCAGCAACAGCAACTTCAGCAGCAGCAGCAGCAGCAGCACACAACAGCAACAGCAA CAGCAACAGCAGCAACAACAACAACAACAGCAGCAGTTTCAACAGCAGCAGCAACAGCAGCAGATG ${\tt GGCCTTTTAAACCAGAGTCGAACTTTACTGTCTCCTCAGCAACAACAGCAGCAGCAGTGGCACTTGGCCCTGGC}$ ATGCCAGCAAAGCCTCTTCAACACTTTTCTAGCCCTGGAGCCCTGGGTCCAACCCTCCTCCTGACGGGCAAGGAA ATAGGAACTACCCCTGAGTCAATGGCCACTGAACCAGGAGGGTAAAGCCCTCACTCTCTGGGGACTCACAACTC ${\tt CAGCAGCAGCAGCTAGCCTGCTCCACACAGCAGGTGGAGGAAGCCATGGGCAGCTAGGCAGTGGATCATCTTCT}$ GAGGCCTCATCTGTGCCCCACCTGCTGGCTCAGCCCTCTGTTTCCTTAGGGGATCAGCCTGGGTCCATGACCCAG AACCTTCTGGGCCCCCAACAGCCCCATGCTAGAGCGGCCCATGCAAAATAATACAGGGCCACAACCTCCCAAACCA GGACCTGTCCTCCAGTCTGGGCAGGGTCTGCCTGGGGTTGGAATCATGCCTACGGTGGGTCAGCTTCGAGCACAG $\tt CTCCAAGGAGTCCTGGCCAAAAACCCACAGCTGCGGCACTTAAGTCCTCAGCAGCAGCAGCAGCTACAGGCACTC$ CTCATGCAGCGGCAGCTGCAGCAGAGTCAGGCAGTACGCCAGACCCCACCCTACCAGGAGCCTGGGACCCAGACC GAGCTAGGGGCAGGGCCTCGACCTCAGGGCCCACCCGGCTCCCTGCCCCACCAGGAGCCTTATCTACAGGACCA GTCCTTGGCCCTGTCCATCCCACACCTCCACCATCCAGCCCTCAAGAGCCCAAAGAGACCTTCACAATTACCTTCC TTGGAGCCGCCTCCTGGGAGGGTCTCACCTGCTGCCCAGCTTGCAGATACCTTGTTTAGCAAGGGTCTGGGA CCTTGGGATCCCCCAGACAACCTAGCAGAAACCCAGAAGCCAGAGCAGAGCAGCCTGGTACCTGGGCATCTGGAC CAGGTGAATGGACAGGTGGTGCCTGAGGCATCCCAACTCAGCATCAAGCAGGAACCTCGGGAAGAGCCATGTGCC $\tt CTGGGAGCCCAGTCAGTGAAGAGGGAGGCCAATGGGGAGCCAATAGGGGCACCAGGAACCACCTCCTG$ AAACTACAGGGTACCCCCAGCAACAAGGAGGATGCAGCAGCAAGGGAAGCCTTTGACACCGAAGCCCAAGCGGGTA TTGCTGAAACAGCTGAAACAGGAGCTGTCCCTGCTGCCCCTAACGGAGCCTGCTATCACCGCCAATTTTAGCCTC TTTGCCCCCTTTGGCAGTGGCTGCCCAGTCAATGGGCAGAGCCAGCTGAGGGGGGGCCTTTTGGAAGTGGGGCCGCTG CCCACTGGCCCTGACTACTATTCCCAGCTGCTTACCAAGAATAACCTGAGTAACCCGCCGACACCACCCTCGTCG CTGCCCCCCCCCCCCCCCCATCGGTGCAGCAGAAGATGGTGAATGGCGTCACCCCATCTGAAGAGCTGGGGGAG CACCCCAAGGATGCTGCCTGTGCCCGGGATAGTGAAAGGGCACTGAGGGATACTTCAGAGGTGAAGAGTCTAGAC CTGCTGGCTGCCTTGCCTACACCCCCTCACAATCAGACTGAGGATGTCAGGATGGAGAGTGATGAGGATAGCGAT TCTCCTGACAGCATTGTGCCAGCTTCATCCCCTGAGAGCATCTTGGGGGGAGGAGGCCCCTCGTTTCCCTCATCTG GGCTCAGGCCGGTGGGAGCAAGAGGACCGGGCCCTCTCCCCTGTCATCCCCCTCATTCCTCGGGCCAGCATCCCA GTCTTCCCAGATACCAAACCTTATGGGGCCCTTGGCCTGGAGGTCCCTGGAAAGCTGCCTGTCACAACTTGGGAA AAGGGCAAAGGAAGTGAGGTCACATGCTCACAGTCTCTGCTGCTGCAGCCAAGAACCTGAATGGCGTGATG GACACTGGCCCTGATTGGCTGAAGCAGTTTGATGCAGTGTTGCCTGGCTATACCCTGAAGAGCCAACTAGACATC $\tt CTGGATGTGCGACAGCTCTCGGCCCCACCTCCTGAAGAACCCTCCCGCCCCCTTCCCCTTGGCACCTTCTCCT$ GCCAGTCCCCTACTGAGCCCTTGGTTGAACTTCCCACCGAACCCTTGGCTGAGCCACCCGTCCCTCACCTCTG CCACTGGCCTCATCCCCTGAATCAGCCCGACCCAAGCCCCGTGCCCGGCCCCCTGAAGAAGGTGAAGATTCCCGT CCTCCTCGCCTCAAGAAATGGAAAGGAGTGCGCTGGAAGCGGCTTCGGCTGCTGACCATCCAGAAGGGCAGT GGGCGGCAGGAGGATGAGCGGGAAGTGGCAGAGTTTATGGAGCAGCTTGGCACAGCCTTGCGACCAGGGTA CCGCGAGACATGCGTCGCTGTTTCTGTCATGAGGAGGGTGACGGGGCCACTGATGGGCCTGCCCGTCTGCTG AACCTGGACCTGGACCTGTGGGTGCACCTCAACTGTGCCCTTTGGTCCACGGAGGTGTATGAGACCCAGGGCGGG

3861/6881 FIGURE 3554E

 ${\tt GCACTGATGAATGTGGAGGTTGCCCTGCACCGAGGACTGCTAACCAAGTGCTCCCTGTGCCAGCGAACTGGTGCC}$ ACCAGCAGCTGCAATCGCATGCGTTGCCCCAATGTCTACCATTTTGCTTGTGCCATCCGTGCCAAGTGCATGTTC TTCAAGGACAAGACCATGCTGTGCCAATGCATAAGATCAAGGGGCCCTGTGAGCAAGAGCTGAGCTCTTTTGCT GTCTTCCGGCGGGTCTACATTGAGCGGGACGAGGTGAAGCAAATCGCTAGCATCATTCAGCGGGGAGAACGGCTG CACATGTTCCGTGTGGGGGGCCTTGTGTTCCACGCCATCGGACAGCTGCTGCCTCACCAGATGGCTGACTTTCAT AGTGCCACTGCCCTCTATCCCGTGGGCTACGAGGCCACGCGCATCTATTGGAGCCTCCGCACCAACAATCGTCGC TGCTGCTATCGCTGTTCTATTGGTGAGAACAACGGGCCGGAGTTTGTAATCAAAGTCATCGAGCAGGGCCTG GAGGACCTGGTCTTCACTGACGCCTCTCCCCAGGCCGTGTGGAATCGCATCATTGAGCCTGTGGCTGCCATGAGA AAAGAGGCTGACATGCTGCGACTCTTCCCTGAGTATCTGAAGGGCGAGGAGCTCTTTGGGCTGACGGTGCATGCC CGGCCCCATACCCTGAACAGCACCAGCATGTCTAAGGCATATCAGAGCACCTTCACAGGCGAGACCAACACCCCC TACAGCAAGCAGTTTGTGCACTCCAAGTCATCTCAGTACCGGCGGCTGCGCACCGAATGGAAGAACAACGTGTAC TACATTGGCACCATCATTCGGAACGAGGTGGCCAACCGGCGGAGAAAATCTACGAAGAGCAGAATCGAGGCATC TACATGTTCCGAATAAACAATGAACATGTGATTGATGCTACGTTGACCGCGGCGCCCTGCCAGGTACATTAACCAT TCCTGTGCCCCTAACTGTGGCCGAAGTCGTGACATTTGACAAAGAGGACAAAATCATCATCATCTCCAGCCGG CGAATCCCCAAAGGAGAGCTAACCTATGACTATCAGTTTGATTTTTGAGACGACCACAAGATCCCCTGC CACTGTGGAGCCTGGAATTGTCGGAAATGGATGAACTAA

3862/6881 FIGURE 3555

 ${\tt GGCCCGGGCGCCTCTTGCA} \underline{{\tt ATG}} {\tt GAGACGGTCATTTCTTCAGATAGCTCCCCAGCTGTGGAAAATGAGCATCCTCA}$ ${\tt ACGAGCTGCCCCTTTATGGGATAGTAAGAAGCAAAGTTTTGTGGGCATGCTGACCATCACTGATTTCATCAATAT}$ CCTGCACCGCTACTATAAATCAGCCTTGGTACAGATCTATGAGCTAGAAGAACACAAGATAGAAACTTGGAGAGA ${\tt GGTGTATCTCCAGGACTCCTTTAAACCGCTTGTCTGCATTTCTCCTAATGCCAGCTTGTTTGATGCTGTCTCTTC}$ ATTAATTCGGAACAAGATCCACAGGCTGCCAGTTATTGACCCAGAATCAGGCAATACTTTGTACATCCTCACCCA ${\tt CAAGCGCATTCTGAAGTTCCTCAAATTGTTTATCACTGAGTTCCCCAAGCCAGAGTTCATGTCCAAGTCTCTGGA}$ AGAGCTACAGATTGGCACCTATGCCAATATTGCTATGGTTCGCACTACCACCCCCGTCTATGTGGCTCTGGGGAT TTTTGTACAGCATCGAGTCTCAGCCCTGCCAGTGGTGGATGAGAAGGGGCGTGTGGTGGACATCTACTCCAAGTT ATCACATTACTTTGAGGGTGTTCTÇAAGTGCTACCTGCATGAGACTCTGGAGACCATCATCAACAGGCTAGTGGA AGCAGAGGTTCACCGACTTGTAGTGGTGGATGAAAATGATGTGGTCAAGGGAATTGTATCACTGTCTGACATCCT GCAGGCCCTGGTGCTCACAGGTGGAGAGAAGAAGCCC<u>TGA</u>GCTGGGGGAAGGGGTCATGCAGCACCAGGGGATAT GCCCAACTCACTGCCTGCAGGCTCTGTGGGAATCAGATGAAACTTGAGGGAATTGTGACTCTGTTCCCTGTT ${\tt CAGGGTCCCCTGCCCTTCTATCTGGGAGCTAGGGAAGGTATGGGGGGAGGAAAGAGAATGGATTTATAGCTACCCT}$ TACCCTCACACATACACTTGAAAAAACTTTCAGCCTAGCCAGTTCTAGCCCCTGTCCTCTTAGATATATCCCCCT TTCTGGGTGAACTATAGGCTCTGTGCCTCTCAGACAAATTCTGATCTCTAAGAGATCCCCAGACCTCACTTGCCT CTGCCTCCATCTTGGCCCTGATTCAACCCTAAGATAATAGCACAACAAAATTCTTCATAAAGATATTTTTATTCA TGG

METVISSDSSPAVENEHPQETPESNNSVYTSFMKSHRCYDLIPTSSKLVVFDTSLQVKKAFFALVTNGVRAAPLW DSKKQSFVGMLTITDFINILHRYYKSALVQIYELEEHKIETWREVYLQDSFKPLVCISPNASLFDAVSSLIRNKI HRLPVIDPESGNTLYILTHKRILKFLKLFITEFPKPEFMSKSLEELQIGTYANIAMVRTTTPVYVALGIFVQHRV SALPVVDEKGRVVDIYSKFDVINLAAEKTYNNLDVSVTKALQHRSHYFEGVLKCYLHETLETIINRLVEAEVHRL VVVDENDVVKGIVSLSDILQALVLTGGEKKP

CTCGACTCTTAGCTTGTCGGGGACGGTAACCGGGACCCGGTGTCTGCTCCTGTCGCCTTCGCCTCCTAATCCCTA GCCACTATGGTGATGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTA $\verb|CTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCCTT| \\$ CAACACCTTCTTCAGTGAGACGGGCGCTGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAG GAAGATGCTGCCAATAACTATGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGA ATTCGCAAGCTGGCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTTGGTGGGGGAACTGGT TCTGGGTTCACCTCCCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATT CACTCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCGTAGAAACCTCGATATCGAGCGC CCAACCTACACTAACCTTAACCGCCTTATTAGCCAGATTGTGTCCTCCATCACTGCTTCCGTCATCTCTGCTGAG TGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTGGTTCCCAAAGATGTCAAT GCTGCCATTGCCACCATCAAAACCAAGCGCAGCATCCAGTTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGC ATCAACTACCAGCCTCCCACTGTGGTGCTGGTGGAGACCTGGCCAAGGCGAGTTTTCAGAGGCCCGTGAAGATA TGGCTGCCCTTGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGAAGGAGAGA AATACTAATTATCCATTCCTTTTGGCCCTGCAGCATGTCATGCTCCCAGAATTTCAGCTTCAGCTTAACTGACAG ACGTTAAAGCTTTCTGGTTAGATTGTTTTCACTTGGTGATCATGTCTTTTCCATGTGTACCTGTAATATTTTTCC ATCATATCTCAAAGTAAAGTCATTAACATC

MERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYTNLN RLISQIVSSITASVISAEKAYHEQLSVAEITNACFEPANQMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIK TKRSIQFVDWCPTGFKVGINYQPPTVVPGGDLAKASFQRPVKIWLPLRRIMRRLVWILLKERVRKKERNTNYPFL LALQHVMLPEFQLQLN

CTCCAGCAGCACCCGAGAGGGTCAGGAGAAAAGCGGAGGAGCTGGGTAGGCCCTGAGGGGCCTCGGTAAGCCAT CATGACCACCCGGCAAGCCACGAAGGATCCCCTCCTCCGGGGTGTATCTCCTACCCCTAGCAAGATTCCGGTACG CTCTCAGAAACGCACGCCTTTCCCCACTGTTACATCGTGCGCCGTGGACCAGGAAACCAAGATCCAAGGAGATG GGTGCAGAAACCACCGCTCAATATTCAACGCCCCCTCGTTGATTCAGCAGGCCCCAGGCCGAAAGCCAGGCACCA GGCAGAGACATCACAAAGATTGGTGGGGATCAGTCAGCCTCGGAACCCCTTGGAAGAGCTCAGGCCTAGCCCTAG GGGTCAAAATGTGGGGCCTGGGCCCCTGCCCAGACAGAGGCTCCAGGGACCATAGAGTTTGTGGCTGACCCTGC AGCCCTGGCCACCATCCTGTCAGGTGAGGGTGTGAAGAGCTGTCACCTGGGGCGCCAGCCTAGTCTGGCTAAAAG AGTACTGGTTCGAGGAAGTCAGGGAGGCACCACCCAGAGGGTCCAGGGTGTTCGGGCCTCTGCATATTTGGCCCC CAGAACCCCACCCACCGACTGGACCCTGCCAGGGCTTCCTGCTTCTCTAGGCTGGAGGGACCAGGACCTCGAGG CAGTTTCCAGGAGCTAAGAAGGGAGACAGCTGGCAGCCGGACTTCAGTGAGCCAGGCCTCAGGATTGCTCCT TGTGGCCTCTCTTGGTCTGGCCCAGCGAGTACCATTAAGAGAAAACCGAGAAATGTCACATACCAGGGACAGCCA TGACTCCCACCTGATGCCCTCCCCTGCCCCTGTGGCCCAGCCCTTGCCTGGCCATGTGGTGCCATGTCCATCACC $\tt CTTTGGACGGGCTCAGCGTGTACCCTCCCAGGCCCTCCAACTCTGACCTCATATTCAGTGTTGCGGCGTCTCAC$ CGTTCAACCTAAAACCCGGTTCACACCCATGCCATCAACCCCCAGAGTTCAGCAGGCCCAGTGGCTGCGTGGTGT TTGTATAAGGTCACTGGAGGGTTCTGGGAAACCACCGGTGGCCACTCTTCTGGACCCCACTCTAACAGAACCCC ${\tt CAGCCTCCAGGAGGTGAAGATTCAACGCATCGGTATCCTGCAACAGCTGTTGAGACAGGAAGTAGAGGGGCTGGT}$ TTCTAGAACTCTGAATGCCACAGAGCATAACTCTGGGACTTCCCACCTTCCTGGACTGTTAAAACACTCAGGGCT GCCAAAGCCCTGTCTTCCAGAGGAGTGCGGGGAACCACAGCCCTGCCCTCCGGCAGAGCCTGGGCCCCCAGAGGC AGCAGAACCCAGGCCCCTAGAGTCCTGTGTAGGAGTGAGCCTGAGATACCGGAGTCCTCTCGCCAGGAACAGCT TGAGGTACCTGAGCCCTCCAGCAGAACCCAGGCCCCTAGAGTCCTACTGTAGGATTGAGCCTGAGATACC GGAGTCCTCTCGCCAGGAACAGCTTGAGGTACCTGAGCCCTGCCCTCCAGCAGAACCCGGGCCCCTTCAGCCCAG CACCCAGGGCCAGTCTGGACCCCCAGGGCCCTGCCCTAGGGTAGAGCTGGGGGGCATCAGAGCCCTGCACCCTGGA CCTCAGCAATCTGGCCCCTCGAACCCTAGCCCTGAGGGAGCGCCTCAAATCGTGTTTAACCGCCATCCACTGCTT CACCAACCCTGTGGCTACATTACTCGAATGGCAGGATGCCCTGTGTTTCATTCCAGTTGGTTCTGCTGCCCCCCA CCCATGGGACTGGGAGCCGCCCACTTTTGTCCTCAATAAAGTTTCTAAAGTA

3867/6881 FIGURE 3560

3868/6881 FIGURE 3561

3870/6881 FIGURE 3563

MFMGAGDAPLGSRPGHPHSSSQVKSKLQIGPPSPGEAQGPLLPSPARGLKFLKLPPTSEKSPSPGGPQLSPQLPR
NSRIPCRNSGSDGSPSPLLARRGLGGGELSPEGAQGLPTSPSPCYTTPDSTQLRPPQSALSTTLSPGPVVSPCYE
NILDLSRSTFRGPSPEPPPSPLQVPTYPQLTLEVPQAPEVLRSPGVPPSPCLPESYPYGSPQEKSLDKAGSESPH
PGRRTPGNSSKKPSQGSGRRPGDPGSTPLRDRLAALGKLKTGPEGALGSEKNGVPARPGIEKTRGPGKSGESAGD
MVPSIHRPLEQLEAKGGIRGAVALGTNSLKQQEPGLMGDPGARVYSSHSMGARVDLEPVSPRSCLTKVELAKSRL
AGALCPQVPRTPAKVPTSAPSLGKPNKSPHSSPTKLPSKSPTKVVPRPGAPLVTKESPKPDKGKGPPWADCGSTT
AQSTPLVPGPTDPSQGPEGLAPHSAIEEKVMKGIEENVLRLQGQERAPGAEVKHRNTSSIASWFGLKKSKLPALN
RRTEATKNKEGAGGGSPLRREVKMEARKLEAESLNISKLMAKAEDLRRALEEEKAYLSSRARPRPGGPAPGPNTG
LGQVQGQLAGMYQGADTFMQQLLNRVDGKELPSKSWREPKPEYGDFQPVSSDPKSPWPACGPRNGLVGPLQGCGK
PPGKPSSEPGRREEMPSEDSLAEPVPTSHFTACGSLTRTLDSGIGTFPPPDHGSSGTPSKNLPKTKPPRLDPPPG
VPPARPPPLTKVPRRAHTLEREVPGIEELLVSGRHPSMPAFPALLPAAPGHRGHETCPDDPCEDPGPTPPVQLAK
NWTFPNTRAAGSSSDPLMCPPRQLEGLPRTPMVRIAAEERERTREQEGVMWGDQFLQ

AGAGTGGAGACTGCTGCACGGACTCTGGAACCATGAACATATTTGATCGAAAGATCAACTTTGATGCGCTTTTAA AATTTTCTCATATAACCCCGTCAACGCAGCAGCACCTGAAGAAGGTCTATGCAAGTTTTGCCCTTTGTATGTTTG TGATATTGATGATTTGGCTGATGGCAACACCTCATAGCCATGAAACTGAACAGAAAAGACTGGGACTTCTTGCTG GATTTGCATTCCTTACAGGAGTTGGCCTGGGCCCTGCCCTGGAGTTTTGTATTGCTGTCAACCCCAGCATCCTTC CCACTGCTTTCATGGGCACGGCAATGATCTTTACCTGCTTCACCCTCAGTGCACTCTATGCCAGGCGCCGTAGCT ACCTCTTCTGGGAGGTATCTTGATGTCAGCCCTGAGCTTGTTGCTTTTGTCTTCCCTGGGGAATGTTTTCTTTG GATCCATTTGGCTTTTCCAGGCAAACCTGTATGTGGGACTGGTGGTCATGTGTGGCCTTCGTCCTTTTTGATACTC AACTCATTATTGAAAAGGCCGAACATGGAGATCAAGATTATATCTGGCACTGCATTGATCTCTTCTTAGATTTCA ACCATCCAGCCTTTCCCAATTAGACTTCCTCTCCTTCCACCCCTCATTTCCTTTTTGCACACATTACAGGTGGTG TGTTCTGTGATAATGAAAAGCATCAGAAAAGCTTTTGTACTTTGTGGTTTCCTCTATTTTGAATTTTTTGATCAA AAAACTGATTAGCAGAATATAGTTTGGAGTTTGGCTTCATCTTCCTGGGGTTCCCCTCACTCCCTTTTTTTGTCAA CCCCATCTGTAGCCTCTTCCTCTACTCAGGCAGTCGACCCGCCACGATGAGAAGTGGGACCAGCAGAGGGCGCCCA ACTTCAGGAGTCCGCTTTCCCACCAGGCTTCATTCACCCAGTGGACCTGAACTGTTTGGTAGAGCCACCCGGCCC TTCCTTCCTCATTGTTTGGTATGCGCACAGTTCCTGTGGGACTGGGCCGTGAGTTTTCCATTGGAAAGAAGT TCAGTGGTCCCATTGTTAACTCAGCCTCAAATCTCAACTGTCAGGCCCTACAAAGAAAATGGAGAGCCTCTTCTG GTGGATGCTTTGCTCCCTCTGAGCTGCCCATGCTGGTCTGGCAAACACCCTTTCTGCTTTGCCTTCACAAAAGT AGCACAAAGGAAAGACTAATTCTTGTCAGGCATTTTTGAAAAGGCTGATTATGTGTATCAAGGTACAGCATCGTA GGGTTCCCCTAAACTTGCCCTGTTTTTGTTTTTTTAGTTTATCCCCTTACTGAGCGGCCTCTACTAGGTGGC TGTGATTAAATGTCCCAAGCAAGGATAGGGAAGGGGAATGGTTGAGCCTCTGGAGATCATTGTAACCAATCCTGC CAGACCTGTTTGGGGCAGTGGGGAGCAAACCTAGATAAGGACCTGTTTGGGGCAGCAGGGAGCAAAATCTCCTTT AACAACCAAGCAGTTCCTCATTCACATCAACAGAGCGAGGCTGTGATAACTTAGGAGGCAGCAATCCTAATAGTC AATGTTCATTTTACTGATGCACTTTAGTTTTTGGTCTGTTACCTGTTTTCCAGAAATTTGTGGCCTTTTAGGCGG GGCTCTGAGCTGCTCTACAGAGCTTCAGTGTGAGAGGATCGAGCCATTGAAAGCTCATTACCAGTAGGACATAAT TTTTGGCTCTCCCTATTCACAACCAGTGCACAGTTTGACACAGTGGCCTCAGGTTCACAGTGCACCATGTCACTG TGCTATCCTACGAAATCATTTGTTTCTAAGTTGTGTTTATTCCTGGAGTGACATGCCACCCCGAATGGCTCACTT TCACTGAGGATGCTGTCCTCTGATTTAGCTGCTGCCTCCAGCCTCTGGCTTGAGAACTTACTAAAGGCACTTCCT TCCTGTTAAACCCCTGTTAACTCTCCATAAATTTGGTGATTCTCTGCTAGGCCTAAGATTTTGAGTTAACATCTC TTGAAGCCAAACTCCACCTTCTGTGCTTTTTGCTTGGGATAATGGAGTTTTTCTTTAGAAACAGTGCCAAGAATG ACAAGATATTAAAAAAAAAAAA

3872/6881 FIGURE 3565

MNIFDRKINFDALLKFSHITPSTQQHLKKVYASFALCMFVAAAGAYVHMVTHFIQAGLLSALGSLILMIWLMATP HSHETEQKRLGLLAGFAFLTGVGLGPALEFCIAVNPSILPTAFMGTAMIFTCFTLSALYARRRSYLFLGGILMSA LSLLLLSSLGNVFFGSIWLFQANLYVGLVVMCGFVLFDTQLIIEKAEHGDQDYIWHCIDLFLDFITVFRKLMMIL AMNEKDKKKEKK

3873/6881 FIGURE 3566

GGGGAAATAAACAAGTATTCATGAGGGTGAAAATGTGACCCAGCAGGAAAATTACAACTATTTTCAATTGACGTT **TG**GATACTATGATGCTGAATGTGCGGAATCTGTTTGAGCAGCTTGTGCGCCGGGTGGAGATTCTCAGTGAAGGAA ATGAAGTCCAATTTATCCAGTTGGCGAAGGACTTTGAGGATTTCCGTAAAAAGTGGCAGAGGACTGACCATGAGC TGGGGAAATACAAGGATCTTTTGATGAAAGCAGAGACTGAGCGAAGTGCTCTGGATGTTAAGCTGAAGCATGCAC GTAATCAGGTGGATGTAGAGATCAAACGGAGACAGAGAGCTGAGGCTGACTGCGAAAAGCTGGAACGACAGATTC AGCTGATTCGAGAGATGCTCATGTGTGACACATCTGGCAGCATTCAACTAAGCGAGGAGCAAAAATCAGCTCTGG CTTTTCTCAACAGAGGCCAACCATCCAGCAGCAATGCTGGGAACAAAAGACTATCAACCATTGATGAATCTGGTT CCATTTTATCAGATATCAGCTTTGACAAGACTGATGAATCACTGGATTGGGACTCTTCTTTGGTGAAGACTTTCA AACTGAAGAAGAGAGAAAAGAGGCGCTCTACTAGCCGACAGTTTGTTGATGGTCCCCCTGGACCTGTAAAGAAAA CTCGTTCCATTGGCTCTGCAGTAGACCAGGGGAATGAATCCATAGTTGCAAAAACTACAGTGACTGTTCCCAATG ATGGCGGGCCCATCGAAGCTGTGCCACTATTGAGACTGTGCCATATTGGACCAGGAGCCGAAGGAAAACAGGTA GCACGCCACAGAGTAATGGAGGGATGCGCCTGCATGACTTTGTTTCTAAGACGGTTATTAAACCTGAATCCTGTG TTCCATGTGGAAAGCGGATAAAATTTGGCAAATTATCTCTGAAGTGTCGAGACTGTCGTGTGGTCTCTCATCCAG AATGTCGGGACCGCTGTCCCTTCCCTGCATTCCTACCCTGATAGGAACACCTGTCAAGATTGGAGAGGGAATGC TGGCAGACTTTGTGTCCCAGACTTCTCCAATGATCCCCTCCATTGTTGTGCATTGTGTAAATGAGATTGAGCAAA GAGGTCTGACTGAGACAGGCCTGTATAGGATCTCTGGCTGTGACCGCACAGTAAAAGAGCTGAAAGAGAAATTCC TCAGAGTGAAAACTGTACCCCTCCTCAGCAAAGTGGATGATATCCATGCTATCTGTAGCCTTCTAAAAGACTTTC TTCGAAACCTCAAAGAACCTCTTCTGACCTTTCGCCTTAACAGAGCCTTTATGGAAGCAGCAGAAATCACAGATG AAGACAACAGCATAGCTGCCATGTACCAAGCTGTTGGTGAACTGCCCCAGGCCAACAGGGACACATTAGCTTTCC TCATGATTCACTTGCAGAGAGTGGCTCAGAGTCCACATACTAAAATGGATGTTGCCAATCTGGCTAAAGTCTTTG GCCCTACAATAGTGGCCCATGCTGTGCCCAATCCAGACCCAGTGACAATGTTACAGGACATCAAGCGTCAACCCA AGGTGGTTGAGCGCCTGCTTTCCTTGCCTCTGGAGTATTGGAGTCAGTTCATGATGGTGGAGCAAGAGAACATTG ACCCCCTACATGTCATTGAAAACTCAAATGCCTTTTCAACACCACAGACACCAGATATTAAAGTGAGTTTACTGG GACCTGTGACCACTCCTGAACATCAGCTTCTCAAGACTCCTTCATCTAGTTCCCTGTCACAGAGAGTCCGTTCCA CCCTCACCAAGAACACTCCTAGATTTGGGAGCAAAAGCAAGTCTGCCACTAACCTAGGACGACAAGGCAACTTTT TTGCTTCTCCAATGCTCAAG**TGA**AGTCACATCTGCCTGTTACTTCCCAGCATTGACTGACTATAAGAAAGGACAC ATCTGTACTCTGCAGCCTCCTGTACTCATTACTACTTTTAGCATTCTCCAGGCTTTTACTCAAGTTTAAT TGCTGGTCATTGTTGGGAGCTTTTAGATGAGACATCTTTCCAGGGGTAGAAGGGTTAGTATGGAATTGGTTGTGA TTCTTTTTGGGGAAGGGGTTATTGTTCCTTTGGCTTAAAGCCAAATGCTGCTCATAGAATGATCTTTCTCTAGT GGAAGTGGGAGGGCAGAGAAGAAGGATTAGACCAGAGGATTTAGGATGCCTCCTTCTAAGAACCAGAAGTTC TCATTCCCCATTATGAACTGAGCTATAATATGGAGCTTTCATAAAAATGGGATGCATTGAGGACAGAACTAGTGA TGGGAGTATGCGTAGCTTTGATTTGGATGATTAGGTCTTTAATAGTGTTGAGTGGCACAACCTTGTAAATGTGAA AGTACAACTCGTATTTATCTCTGATGTGCCGCTGGCTGAACTTTGGGTTCATTTGGGGTCAAAGCCAGTTTTTCT TTTAAAATTGAATTCATTCTGATGCTTGGCCCCCATACCCCCAACCTTGTCCAGTGGAGCCCAACTTCTAAAGGT CAATATATCATCCTTTGGCATCCCAACTAACAATAAAGAGTAGGCTATAAGGGAAGATTGTCAATATTTTGTGGT AAGAAAAGCTACAGTCATTTTTCTTTGCACTTTGGATGCTGAAATTTTTCCCATGGAACATAGCCACATCTAGA TAGATGTGAGCTTTTTCTTCTGTTAAAATTATTCTTAATGTCTGTAAAAACGATTTTCTTCTGTAGAATGTTTGA CTTCGTATTGACCCTTATCTGTAAAACACCTATTTGGGATAATATTTTGGAAAAAAAGTAAATAGCTTTTTCAAAA **TGAAAAAAAA**

3874/6881 FIGURE 3567

MDTMMLNVRNLFEQLVRRVEILSEGNEVQFIQLAKDFEDFRKKWQRTDHELGKYKDLLMKAETERSALDVKLKHA RNQVDVEIKRRQRAEADCEKLERQIQLIREMLMCDTSGSIQLSEEQKSALAFLNRGQPSSSNAGNKRLSTIDESG SILSDISFDKTDESLDWDSSLVKTFKLKKREKRRSTSRQFVDGPPGPVKKTRSIGSAVDQGNESIVAKTTVTVPN DGGPIEAVSTIETVPYWTRSRRKTGTLQPWNSDSTLNSRQLEPRTETDSVGTPQSNGGMRLHDFVSKTVIKPESC VPCGKRIKFGKLSLKCRDCRVVSHPECRDRCPLPCIPTLIGTPVKIGEGMLADFVSQTSPMIPSIVVHCVNEIEQ RGLTETGLYRISGCDRTVKELKEKFLRVKTVPLLSKVDDIHAICSLLKDFLRNLKEPLLTFRLNRAFMEAAEITD EDNSIAAMYQAVGELPQANRDTLAFLMIHLQRVAQSPHTKMDVANLAKVFGPTIVAHAVPNPDPVTMLQDIKRQP KVVERLLSLPLEYWSQFMMVEQENIDPLHVIENSNAFSTPQTPDIKVSLLGPVTTPEHQLLKTPSSSSLSQRVRS TLTKNTPRFGSKSKSATNLGRQGNFFASPMLK

3875/6881 FIGURE 3568

GGCCCGGGCGGAACTCCGGGGCCTCCTGTGCGAATGGGCCCGGGTCCAAGGGCTGTACCGCTCCCCGATG CCCGGAGCGGCCTATCCGAGACCAGGTATGTTGCCAGGCAGCCGAATGACACCTCAGGGACCTTCCATGGGACCC GCTGACAAAATTCTACCTCAAAGGATTCGTGAACTGGTACCAGAATCCCAGGCCTATATGGATCTCTTGGCTTTT GAAAGGAAACTGGACCAGACTATCATGAGGAAACGGCTAGATATCCAAGAGGCCTTGAAACGTCCCATCAAGCAA GTGGCTTCCTGGGAGCTTCGGGTAGAAGGACGGCTCCTGGAGGATTCAGCCTTGTCCAAATATGATGCCACTAAA ${\tt CAAAAGAGGAAGTTCTCTTTTTTAAGTCCTTGGTGATTGAACTGGACAAAGACCTGTATGGGCCAGACAAC}$ CATCTGGTAGAATGGCACAGGACCCCACTACCCAGGAGACCGATGGCTTTCAGGTGAAGCGGCCGGGAGACGTG AATGTACGGTGTACTGTCCTACTGATGCTGGATTACCAGCCTCCCCAGTTTAAATTAGACCCCCGCCTAGCTCGA CTCCTGGGCATCCATACCCAGACTCGTCCAGTGATCATCCAAGCACTGTGGCAATATATTAAGACACATAAGCTC CAGGACCCTCACGAGCGGGAGTTTGTCATCTGTGACAAGTACCTGCAGCAGATCTTTGAGTCTCAACGTATGAAG TTTTCAGAGATCCCTCAGCGGCTCCATGCCTTGCTTATGCCACCAGAACCTATCATCATTAATCATGTCATCAGT GTTGACCCGAATGATCAGAAAAAGACAGCTTGTTATGACATTGATGTTGAAGTGGATGACACCTTGAAGACCCAG ATGAATTCTTTTCTGCTGTCCACTGCCAGCCAACAGGAGATTGCTACTCTAGACAACAAGATCCATGAGACAATA GAAACCATCAACCAGCTGAAGACTCAGCGGGAGTTCATGCTGAGCTTTGCCAGAGACCCTCAGGGTTTCATCAAT GACTGGCTTCAGTCCCAGTGCAGGGACCTCAAGACAATGACTGATGTGGTGGGTAACCCAGAGGAGGAGCGCCGA GCTGAGTTCTACTTCCAGCCCTGGGCTCAGGAGGCTGTGTGCCGATACTTCTACTCCAAGGTGCAGCAGAGACGA ${\tt CAAGAATTAGAGCCATGGGGAATCCGGAATACA} {\tt TAG} {\tt GGCCTCTCCCACAGCCCTGATTCGACTGCACCAATT}$ TGGTTCAAGGACAACACCAGAATGAAGAGGGTCTCACAAGACACCTGTTATCCTCTTCTTCACCCTATCTCTTC CCACCCCAGCTTCCCTTTGCCCCACAAAGTTCCCATGTGCCTGTACCCTCCCCTGGTCTACATAGGACCTCTAG ATAGTGTTAGAGAGAGAACATGTAGTGGTAATGAGTGCTTGGAATGGATTGGGCCTCAGGCCAGGTGGTCTTCAA GGGGACCAGCTAACTGATCCTGCCCTTCAGAGACCCAGGAGTTGGGAGCTTTCGCTCCTTCTCCAAGACTCAGGC GTTTGGAACAAACTCTCCCTTCACTTGTTGCCCTGTAGCACTACAGAAACCCTGGTTCTTGGGCTCCACTGAGCC CCAGGTCAGTCCCCAGCCCTCTGGGTTGGCCTGCTGTCAGTGCTTCTCTCACTCCTTAGTTGGGGTCCACATCAG TATTGGAGTTTTGTTCTTTATTGCTCCCTCCCAGACACTCCCTGTGGCTGCCCTTTGTGATTCCCTCAGATCTGC CCTAATCCCGGGCATTTGGGTGGGGGAATCTTGCCTTTCCCTTTCAGAGCCCCAGGGATCTCATCTGGGGAACTG TGCATCCCTTAATGGAGAAACGGGCCTAAAACCAAACGGGTAAAAAGCCCTGGGCCATCCCTGTCTCCTGTCCC $\tt TTGTCTGCCCAGTTGACACCTACTGGTGACTTCTAGGGCACTGAGGAGTGAAAGCGCCTAGGGCTGGAGAATAGC$ GCTGAGTTGGGTTTGTGACTCTTCCCTCCCTGCCTCACAGGATTGTGACTCCCCAGCCCCTGCCCTCAAAGCT TCAGACCCCTCAGGTAGCAGCAGGACCTTGTGATCTTGGCCCCTTGGATCTGAGATGGTTTTTGCATCTTTCCAG GAGAGCCTCACATTCTTCCTCCAGGTTGTATCACCCCCGAGTTAGCATATCCCAGGCTCGCAGACTCAACACAGC AAGGGTGGGAGACAGCTGGGCACAAAGGGGGAATTCCGTTCAGCATGGGCTCTAAACCCACAGAACTGACAAAGC

3876/6881 FIGURE 3569

 $\label{thm:contract} MGPAPGQGLYRSPMPGAAYPRPGMLPGSRMTPQGPSMGPPGYGGNPSVRPGLAQSGMDQSRKRPAPQQIQQVQQQ AVQNRNHNAKKKMADKILPQRIRELVPESQAYMDLLAFERKLDQTIMRKRLDIQEALKRPIKQKRKLRIFISNT FNPAKSDAEDGEGTVASWELRVEGRLLEDSALSKYDATKQKRKFSSFFKSLVIELDKDLYGPDNHLVEWHRTATT QETDGFQVKRPGDVNVRCTVLLMLDYQPPQFKLDPRLARLLGIHTQTRPVIIQALWQYIKTHKLQDPHEREFVIC DKYLQQIFESQRMKFSEIPQRLHALLMPPEPIIINHVISVDPNDQKKTACYDIDVEVDDTLKTQMNSFLLSTASQ QEIATLDNKIHETIETINQLKTQREFMLSFARDPQGFINDWLQSQCRDLKTMTDVVGNPEEERRAEFYFQPWAQE AVCRYFYSKVQQRRQELEQALGIRNT$

3877/6881 **FIGURE 3570**

3878/6881 FIGURE 3571

GTACCTCACGGAAGCCGGCTTTGGCCCTGCGGCTGCTACCGTCGCCGCGGAGAAATTGTTGGATCTGGCAGTCTA GGAATGAATCTCCTCTCAGCCTTTAAGCTCACCTGGTCAGAATCCTTGGATGAGCCTGTGGGACCGTTCCTCCTA ${\tt GCCCGGTGGTTTGGGACCAGTGGCTTTGGGACTGTAAGAGGATGGACAAAGATTCTCAGGGGCTGCTAGATTCAT}$ AGGCCTTGGGCACCATCCCTAAACGGAGAAGCTCCTCCAGGTTCATCAAGAGGAAGAAGTTCGATGATGAGCTGG TGGAGAGCAGCCTGGCAAAATCTTCTACCCGGGCAAAGGGGGGCCAGTGGGGTGGAACCAGGGCGCTGTTCGGGGA GTGAACCCTCCTCCAGTGAGAAGAAGAAGGTATCCAAAGCCCCCAGCACTCCTGTGCCACCCAGCCCAGCCCCAG $\tt CCCCTGGACTCACCAAGCGTGTGAAGAAGAGTAAACAGCCACTTCAGGTGACCAAGGATCTGGGCCGCTGGAAGC$ CTGCAGATGACCTCCTGCTCATAAATGCTGTGTTGCAGACCAACGACCTGACCTCCGTCCACCTGGGCGTGAAAT TCAGCTGCCGCTTCACCCTTCGGGAGGTCCAGGAGCGTTGGTACGCCCTGCTCTACGATCCTGTCATCTCCAAGT TGGCCTGTCAGGCCATGAGGCAGCTGCACCCAGAGGCTATTGCAGCCATCCAGAGCCAGGCCCTGTTTAGCAAGG CTGAGGAGCAGCTGCTGAGCAAAGTGGGATCGACCAGCCCAGCCTTGGAGACCTTCCAGGACCTGCTGCACA GACACCCTGATGCCTTCTACCTGGCCCGTACCGCGAAGGCCCTGCAGGCCCACTGGCAGCTCATGAAGCAGTATT ACCTGCTGGAGGACCAGACAGTGCAGCCGCTGCCCAAAGGGGACCAAGTGCTGAACTTCTCTGATGCAGAGGACC TGATTGATGACAGTAAGCTCAAGGACATGCGAGATGAGGTCCTGGAACATGAGCTGATGGTGGCTGACCGGCGCC AGAAGCGAGAGATTCGGCAGCTGGAACAGGAACTGCATAAGTGGCAGGTGCTAGTGGACAGCATCACAGGCATGA GCTCTCCGGACTTCGACAACCAGACACTGGCAGTGCTGCGGGGCCGCATGGTGCGGTACCTGATGCGCTCGCGTG AGATCACCCTGGGCAGAGCAACCAAGGATAACCAGATTGATGTGGACCTGTCTCTGGAGGGTCCGGCCTGGAAGA TATCCCGGAAACAAGGTGTCATCAAGCTGAAGAACAACGGTGATTTCTTCATTGCCAATGAGGGTCGACGGCCCA TCTACATCGATGGACGGCCGGTGCTCTGTGGCTCCAAATGGCGCCTCAGCAACAACTCTGTGGTGGAGATCGCCA GCCTGCGATTCGTCTTCCTTATCAACCAGGACCTCATTGCCCTCATCAGGGCTGAGGCTGCCAAGATCACACCAC AGTGAGGAGTGGTGGCAGGACTCGTGGGCCCTCTCCGGCCTGTTTCCCCTGCCACTCCAGCCCCTTGAGCTGGG TAGGGCTGGCCTTTGTGAAGCCAGCAGAGGCTGAGAACCTCAGGCTTCCCTAGATCCAGAGCCCCTCCCCATCTT CCTCTCTAAAAACAACCCTACCCCCATTGCCACCTTCACTCCTGTGTCTCCAGCTGATTAGCCTCAGACTCT TCTTTTATTGTTTTTCTTTTGTAAATAAAAAGCACCAGGTTCC

3879/6881 FIGURE 3572A

GGCACGAGGCGCTAGGTAGAGCGCCGGGACCTGTGACAGGGCTGGTAGCAGCGCACAGGAAAGGCGGCTTTTAGC CAGGTATTTCAGTGTCTGTAGACAAG<u>ATG</u>GAATCATCTCCATTTAATAGACGGCAATGGACCTCACTATCATTGA GGGTAACAGCCAAAGAACTTTCTCTTGTCAACAAGAACAAGTCATCGGCTATTGTGGAAATATTCTCCAAGTACC AGAAAGCAGCTGAAGAAACAAACATGGAGAAGAAGAAGTAACACCGAAAATCTCTCCCAGCACTTTAGAAAGG GGACCCTGACTGTTAAAGAAGAGTGGGAGAACCCAGGGCTGGGAGCAGAGTCTCACAGACTCTCTACGGA AAGCTGACCAAGAAGAACAAATCCACCCCAGATCTAGACTCAGGTCACCTCCTGAAGCCCTCGTTCAGGGTCGAT ATCCCCACATCAAGGACGGTGAGGATCTTAAAGACCACTCAACAGAAAGTAAAAAAATGGAAAATTGTCTAGGAG AATCCAGGCATGAAGTAGAAAATCAGAAATCAGTGAAAACACAGATGCTTCGGGCAAAATAGAGAAATATAATG GAAGTGCAAGTGGAAGGAAGATCTCTGAAAACAGCTATTCTCTAGATGACCTGGAAATAGGCCCAGGTCAGTTGT CATCTTCTACATTTGACTCGGAGAAAATGAGAGTAGACGAAATCTGGAACTTCCACGCCTCTCAGAAACCTCTA AAGCCAGTGGTGGCGAAATCAAAATTCATAAAATGGAGCAAAAGGAGAATGTGCCCCCAGGTCCTGAGGTCTGCA TCACCCATCAGGAAGGGGAAAAGATTTCTGCAAATGAGAATAGCCTGGCAGTCCGTTCCACCCCTGCCGAAGATG ACTCCCGTGACTCCCAGGTTAAGAGTGAGGTTCAACAGCCTGTCCATCCCAAGCCACTAAGTCCAGATTCCAGAG CCTCCAGTCTTTCTGAAAGTTCTCCCCCAAAGCAATGAAGAAGTTTCAGGCACCTGCAAGAGAGACCTGCGTGG AATGTCAGAAGACAGTCTATCCAATGGAGCGTCTCTTGGCCAACCAGCAGGTGTTTCACATCAGCTGCTTCCGTT GCTCCTATTGCAACAACTCAGTCTAGGAACATATGCATCTTTACATGGAAGAATCTATTGTAAGCCTCACT TCAATCAACTCTTTAAATCTAAGGGCAACTATGATGAAGGCTTTGGGCACAGACCACAAGGATCTATGGGCAA GCAAAAATGAAAACGAAGAGATTTTGGAGAGACCAGCCCAGCTTGCAAATGCAAGGGAGACCCCTCACAGCCCAG GGGTAGAAGATGCCCCTATTGCTAAGGTGGGTGTCCTGGCTGCAAGTATGGAAGCCAAGGCCTCCTCTAGCAGG AGAAGGAAGACAAGCCAGCTGAAACCAAGAAGCTGAGGATCGCCTGGCCACCCCCCACTGAACTTGGAAGTTCAG GAAGTGCCTTGGAGGAAGGGATCAAAATGTCAAAGCCCAAATGGCCTCCTGAAGACGAAATCAGCAAGCCCGAAG TTCCTGAGGATGTCGATCTAGATCTGAAGAAGCTAAGACGATCTTCTTCACTGAAGGAAAGAAGCCGCCCATTCA CTGTAGCAGCTTCATTTCAAAGCACCTCTGTCAAGAGCCCAAAAACTGTGTCCCCACCTATCAGGAAAGGCTGGA GCATGTCAGAGCAGAGTGAAGAATCTGTGGGTGGAAGAGTTGCAGAAAAGGAAACAAGTGGAAAAATGCCAAGGCTT CTAAGAAGAATGGGAATGTGGGAAAAACAACCTGGCAAAACAAAGAATCTAAAGGAGAGACAGGGAAGAGAAGTA AGGAAGGTCATAGTTTGGAGATGGAGAATGAGAATCTTGTAGAAAATGGTGCAGACTCCGATGAAGATGATAACA GCTTCCTCAAACAACCAATCTCCACAAGAACCCAAGTCTCTGAATTGGTCGAGTTTTGTAGACAACACCTTTGCTG ${ t TGGAAGAACAGATAAAGAGAAATCGGTATTATGATGAGGATGAGGATGAAGAG{ t { t TGA}} CAAATTGCAATGATGCTGG$ GCCTTAAATTCATGTTAGTGTTAGCGAGCCACTGCCCTTTGTCAAAATGTGATGCACATAAGCAGGTATCCCAGC AAAAAACACATTCTAAATACTAGAGATAACTTTACTTAAATTCTTCATTTTAGCAGTGATGATATGCATAAGTGC TGTAAGGCTTGTAACTGGGGAAATATTCCACCTGATAATAGCCCAGATTCTACTGTATTCCCAAAAGGCAATATT AAGGTAGATAGATGATTAGTAGTATTGTTACACACTATTTTGGAATTAGAGAACATACAGAAGGAATTTAGGG GCTTAAACATTACGACTGAATGCACTTTAGTATAAAGGGCACAGTTTGTATATTTTTAAATGAATACCAATTTAA TTTTTTAGTATTTACCTGTTAAGAGATTATTTAGTCTTTAAATTTTTTAGGTTAATTTTCTTGCTGTGATATATA TGAGGAATTTACTACTTTATGTCCTGCTCTCTAAACTACATCCTGAACTCGACGTCCTGAGGTATAATACAACAG AGCACTTTTTGAGGCAATTGAAAAACCAACCTACACTCTTCGGTGCTTAGAGAGATCTGCTGTCTCCCAAATAAG ATTACTGAAAGCTGCAATATTTTAGTAATACCTTCGGGATCACTGTCCCCCATCTTCCGTGTTAGAGCAAAGTGA AGAGTTTAAAGGAGGAAGAAGAACTGTCTTACACCACTTGAGCTCAGACCTCTAAACCCTGTATTTCCCTT TCTCAGGGTGAAATTAAACCAACTATAGGCCTTTTTCTTGGGATGATTTTCTAGTCTTAAGGTTTGGGGACATTA TAGGCTTTTCTTTGTACTGCATTTATAGAGATTTAGCTTTAATATTTTTTAGAGATGTAAAACATTCTGCTTTCT

3880/6881 FIGURE 3572B

3881/6881 FIGURE 3573

MESSPFNRRQWTSLSLRVTAKELSLVNKNKSSAIVEIFSKYQKAAEETNMEKKRSNTENLSQHFRKGTLTVLKKK WENPGLGAESHTDSLRNSSTEIRHRADHPPAEVTSHAASGAKADQEEQIHPRSRLRSPPEALVQGRYPHIKDGED LKDHSTESKKMENCLGESRHEVEKSEISENTDASGKIEKYNVPLNRLKMMFEKGEPTQTKILRAQSRSASGRKIS ENSYSLDDLEIGPGQLSSSTFDSEKNESRRNLELPRLSETSIKDRMAKYQAAVSKQSSSTNYTNELKASGGEIKI HKMEQKENVPPGPEVCITHQEGEKISANENSLAVRSTPAEDDSRDSQVKSEVQQPVHPKPLSPDSRASSLSESSP PKAMKKFQAPARETCVECQKTVYPMERLLANQQVFHISCFRCSYCNNKLSLGTYASLHGRIYCKPHFNQLFKSKG NYDEGFGHRPHKDLWASKNENEEILERPAQLANARETPHSPGVEDAPIAKVGVLAASMEAKASSQQEKEDKPAET KKLRIAWPPPTELGSSGSALEEGIKMSKPKWPPEDEISKPEVPEDVDLDLKKLRRSSSLKERSRPFTVAASFQST SVKSPKTVSPPIRKGWSMSEQSEESVGGRVAERKQVENAKASKKNGNVGKTTWQNKESKGETGKRSKEGHSLEME NENLVENGADSDEDDNSFLKQQSPQEPKSLNWSSFVDNTFAEEFTTQNQKSQDVELWEGEVVKELSVEEQIKRNR YYDEDEDEE

3882/6881 FIGURE 3574

3883/6881 FIGURE 3575

MEDSHKSTTSETAPQPGSAVQGAHISHIAQQVSSLSESEESQDSSDSIGSSQKAHGILARRPSYRKILKDLSSED TRGRKGDGENSGVSAAVTSMSVPTPIYQTSSGQYIAIAPNGALQLASPGTDGVQGLQTLTMTNSGSTQQGTTILQ YAQTSDGQQILVPSNQVVVQTASGDMQTYQIRTTPSATSLPQTVVMTSPVTLTSQTTKTDDPQLKREIRLMKNRE AARECRRKKKEYVKCLENRVAVLENQNKTLIEELKTLKDLYSNKSV

3884/6881 FIGURE 3576

GTTTTTTTCCCTTCTGAGCA<u>ATG</u>GAGCTTACCATCTTTATCCTGAGACTGGCCATTTACATCCTGACATTTCCCT TGTACCTGCTGAACTTTCTGGGCTTGTGGAGCTGGATATGCAAAAAATGGTTCCCCTACTTCTTGGTGAGGTTCA CTGTGATATACAACGAACAGATGGCAAGCAAGAAGCGGGAGCTCTTCAGTAACCTGCAGGAGTTTGCGGGCCCCT $\tt CCGGGAAACTCTCCCTGCTGGAAGTGGGCTGTGGCACGGGGGCCAACTTCAAGTTCTACCCACCTGGGTGCAGGG$ TGACCTGTATTGACCCCAACCCCAACTTTGAGAAGTTTTTGATCAAGAGCATTGCAGAGAACCGACACCTGCAGT TTGAGCGCTTTGTGGTAGCTGCCGGGGAGAACATGCACCAGGTGGCTGATGGCTCTGTGGATGTGGTGGTCTGCA CCCTGGTGCTGTGTGAAGAACCAGGAGCGGATTCTCCGCGAGGTGTGCAGAGTGCTGAGACCGGGAGGGG CTTTCTATTTCATGGAGCATGTGGCAGCTGAGTGTTCGACTTGGAATTACTTCTGGCAACAAGTCCTGGATCCTG CCTGGCACCTTCTGTTTGATGGGTGCAACCTGACCAGAGAGGCTGGAAGGCCCTGGAGCGGCCCAGCTTCTCTA AGCTGAAGCTGCAGCACATCCAGGCCCCACTGTCCTGGGAGTTGGTGCGCCCTCATATCTATGGATATGCTGTGA **AATAG**TGTGAGCTGGCAGTTAAGAGCTGAATGGCTCAAAGAATTTAAAGCTTCAGTTTTACATTTAAAATGCTAA GACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAGTAGAGACAGGGAGACAGGGTCTCACTGTGTTGCCTAG GCCGGTCTTGAACTCCTGGGCTCAAGTGATTCTCCCACCTTGACCTCCTAAATTGTTGGGATTACAGGTGTGAGA CAGTGCACCTGGCCGAAATAGCTCAAGTTTCTGAAAAACAAATCTGAATCTATTTGTTATTCTTAGCGTCACTGG TCTGGCTTTCAGAATTAACATACAAGGTTGCCACACCTAGTTCTGCCCAGCTTTATGTCTTTTATTCCAGTATTC CACCAAAGTTTGTTTTCCTGCATTCCAGTTCTCAAGTCTTAAGATAAAGATTGTACTTGACAGTTTTAGTATATCC ATAAAACTATTTGAGGTGGTTAAGGTTCTTGGGTTCATTTTCCTTAATACTTTGCTGAATATTGTAGATTGTAGG CAATGAAAAAGTCTACTAAATTAGGAAAACCTTGAATAATTAGGTATCCTAGGTAAGAGCCCCTAAACATCAAGC AATCTGTGAGTCTGTAAAGAAATAATTTTTTTGGATTATTCTTATCTAATTCCACCCCTGTTGGAAGATGATT TCTTTGTTCTTTGCAACTATGGAAGCTGTGAAAATCATCACAAGTGCCTCTGAAAGCGAGTGTTAGGTTAG AGGGTTTAATATTTTCTGCAATGGTTTGTAGGAATTTTAATAATGTAGTATATTTTCTGAGATGATTTTGTAAA AGTACTATTTTAAATATCAAATCAACCAATAAATTCACATTTGTGTTAGGAACAG

MELTIFILRLAIYILTFPLYLLNFLGLWSWICKKWFPYFLVRFTVIYNEQMASKKRELFSNLQEFAGPSGKLSLL EVGCGTGANFKFYPPGCRVTCIDPNPNFEKFLIKSIAENRHLQFERFVVAAGENMHQVADGSVDVVVCTLVLCSV KNQERILREVCRVLRPGGAFYFMEHVAAECSTWNYFWQQVLDPAWHLLFDGCNLTRESWKALERASFSKLKLQHI QAPLSWELVRPHIYGYAVK

3886/6881 FIGURE 3578

CCTGCCTCTCGCCTCCAGCCTCCAACGCTCGCCACAGCCCTCTCATCTCCTGGAACCATGGCCAGCACATCCACC ACCATCAGGAGCCACAGCAGCAGCCGGGGTTTCAGTGCCAACTCAGCCAGGCTCCCTGGGGTCAGCCGCTCT GGCTTCAGCAGCATCTCCGTGTCCCGCTCCAGGGGCAGTGGTGGCCTGGGTGGTGCATGTGGAGGAGCTGGCTTT GGCAGCCGCAGTCTGTATGGCCTGGGGGGCTCCAAGAGGATCTCCATTGGAGGGGGCAGCTGTGCCATCAGTGGC ${\tt GGCTATGGCAGCAGAGCCGGAGGCAGCTATGGCTTTGGTGGCGCCGGGAGTGGATTTGGTTTCGGTGGTGGAGCC}$ GGCATTGGCTTTGGTCTGGTGGTGGAGCCGGCCTTGCTGGTGGCTTTTGGGGGGCCCTGGCTTCCCTGTGTGCCCC $\tt CCTGGAGGCATCCAAGAGGTCACCGTCAACCAGAGTCTCCTGACTCCCTCAACCTGCAAATTGACCCCGCCATC$ CAGCGGGTGCGGCCGAGGAGCGTGAGCAGATCAAGACCCTCAACAACAAGTTTGCCTCCTTCATCGACAAGGTG CGGTTCCTAGAGCAGCAGAACAAGGTTCTGGACACCAAGTGGACCCTGCTGCAGGAGCAGGGCACCAAGACTGTG AGGCAGAACCTGGAGCCGTTGTTCGAGCAGTACATCAACAACCTCAGGAGGCAGCTGGACAGCATCGTCGGGGAA CGGGGCCGCCTGGACTCGGAGCTGAGAAACATGCAGGACCTGGTGGAGGACCTCAAGAACAAATATGAGGATGAA ATCAACAAGCGCACAGCAGCAGAAATGAATTTGTGACTCTGAAGAAGGATGTGGATGCTGCCTACATGAACAAG GTTGAACTGCAAGCCAAGGCAGACACTCTCACAGATGAGATCAACTTCCTGAGAGCCTTGTATGATGCAGAGCTG TCCCAGATGCAGACCCACATCTCAGACACATCCGTGGTGCTATCCATGGACAACAACCGCAACCTGGACCTGGAC AGCATCATCGCTGAGGTCAAGGCCCAATACGAGGAGATTGCTCAGAGGAGCCGGGCTGAGGCTGAGTCCTGGTAC CAGACCAAGTACGAGGAGCTGCAGGTCACAGCAGGCAGACATGGGGACGACCTGCGCAACACACAAGCAGGAGATT GCTGAGATCAACCGCATGATCCAGAGGCTGAGATCTGAGATCGACCATGTCAAGAAGCAGTGTGCCAGCCTGCAG GCTGCCATTGCTGATGCTGAGCAGCGTGGGGAGATGGCACTCAAGGATGCTAAGAACAAGCTGGAAGGGCTGGAG GATGCCCTGCAGAAGGCCAAGCAGGACCTGGCCCGGCTGCTGAAGGAGTACCAGGAGCTGATGAATGTCAAGCTG GCCCTGGATGTGGAGATCGCCACCTACCGCAAGCTGCTGGAGGGCGAGGAGTGCAGGCTGAATGGCGAAGGCGTT GGACAAGTCAACGTCTCTGTAGTACAGTCCACCATCTCCAGTGGCTATGGCGGTGCCAGCGGTGTCGGCAGTGGC TTAGGCCTGGGTGGAGGAAGCAGCTACTCCTATGGCAGTGGTCTTGGCATTGGAGGTGGCTTCAGTTCCAGCAGT GGCAGAGCCATTGGGGGTGGCCTCAGCTCTGTTGGAGGCGGCAGTTCCACCATCAAGTACACCACCACCACCTCCTCC TCCAGCAGGAAGAGCTACAAGCACTAAAGTGCTGCCTCCAGCTCTCGGTCCCACAGTCCTCAGGCCCTTCTCTGG CTGCAGAGCCGTCTCCTCAGGTTGCCTATCCTCTCGGCCTCTAGTCTTCCCTGCTCTCCGAGGTAGAGCTGGG TATGGATGCTTAGTGCCCTCACTTCTCTCTGTCTATACCTGCCCCATCTGAGCACCCATTGCTCACCATCAGATC AACCTTTGATTTTACATCATAATGTATTCACCAATGGAGCTTCACTTTGTTACTAAATTATTAATTTCTTGCCTC CAAAATTGTTCTCTCTGAGGCTGAGCATTATAAGAAAATGATCTCTGTTCCTTTTCATTACTGAAAATCGCCTGG GGCTTATTTCAGAACAACTTCCACTTATTTTCCATTGGCCCCCAAACTCCCTAAGTTAAAAGTATTGTGAACCCC CGCCCCGCAGTATGCATGGAAGCACAAGTGACTAGTCGTATGATGTACACAGTCTTTCTCCCTGTGATGATTTCT CTGCTCTTTGCTCTTTGTAATTTCTAAATAAAGCAGGTTTTAGAATAA

CATGGCCAGCACCACCACCATCAGGAGCCACAGCAGCAGCCGGGGTTTCAGTGCCAACTCAGCCAGGCT CCCTGGGGTCAGCCGCTCTCAGCAGCGTCTCCGTGTCCCGCTCCAGGGGCAGTGGTGGCCTGGGTGGTGC ATGTGGAGGAGCTGGCTTTGGCAGCCGCAGTCTGTATGGCCTGGGGGGCTCCAAGAGGATCTCCATTGGAGGGGG CAGCTGTGCCATCAGTGGCGGCTATGGCAGCAGAGCCGGAGGCAGCTATGGCTTTGGTGGCGCCGGGAGTGGATT TGGTTTCGGTGGTGGAGCCGGCATTGGCTTTGGTCTGGTGGTGGAGCCGGCCTTGCTGGTGGCTTTGGGGGGCCC TGGCTTCCCTGTGTGCCCCCTGGAGGCATCCAAGAGGTCACCGTCAACCAGAGTCTCCTGACTCCCCTCAACCT GCAAATCGATCCCACCATCCAGCGGGTGCGGGCTGAGGAGCGTGAACAGATCAAGACCCTCAACAACAAGTTTGC CTCCTTCATCGACAAGGTGCGGTTCCTGGAGCAGCAGAACAAGGTTCTGGAAACAAAGTGGACCCTGCTGCAGGA GCAGGGCACCAAGACTGTGAGGCAGAACCTGGAGCCGTTGTTCGAGCAGTACATCAACAACCTCAGGAGGCAGCT GGACAGCATTGTCGGGGAACGGGGCCGCCTGGACTCAGAGCTCAGAGGCATGCAGGACCTGGTGGAGGACTTCAA GAACAAATATGAGGATGAAATCAACAAGCGCACAGCAGCAGAAATGAATTTGTGACTCTGAAGAAGGATGTGGA TGCTGCCTACATGAACAAGGTTGAACTGCAAGCCAAGGCAGACACTCTCACAGACGAGATCAACTTCCTGAGAGC CTTGTATGATGCAGAGCTGTCCCAGATGCAGACCCACATCTCAGACACATCTGTGGTGCTGTCCATGGACAACAA ${\tt CCGCAACCTGGACCTGGACATCATCGCTGAGGTCAAGGCCCAATATGAGGAGATTGCTCAGAGAAGCCGGGC}$ CAACACCAAGCAGGAGATTGCTGAGATCAACCGCATGATCCAGAGGCTGAGATCTGAGATCGACCACGTCAAGAA GCAGTGCGCCAACCTGCAGGCCGCCATTGCTGATGCTGAGCAGCGTGGGGAGATGGCCCTCAAGGATGCCAAGAA GCTGATGAATGTCAAGCTGGCCCTGGACGTGGAGATCGCCACCTACCGCAAGCTGCTGGAGGGTGAGGAGTGCAG GCTGAATGGCGAAGGCGTTGGACAAGTCAACATCTCTGTGGTGCAGTCCACCGTCTCCAGTGGCTATGGCGGTGC CAGTGGTGTCGCCAGTGGCTTAGGCCTGGGTGGAGGAAGCAGCTACTCCTATGGCAGTGGTCTTGGCGTTGGAGG TGGCTTCAGTTCCAGCAGTGGCAGAGCCATTGGGGGTGGCCTCAGCTCTGTTGGAGGCGGCAGTTCCACCATCAA GTACACCACCTCCTCCAGCAGGAAGAGCTATAAGCACTAAAGTGCGTCTGCTAGCTCTCGGTCCCACAG ${\tt TCCTCAGGCCCCTCTCTGGCTGCAGAGCCCTCTCCTCAGGTTGCCTTTCCTCTCGGCCTCCAGTCTCCCCTGC}$ ATTGCTCACCATCAGATCAACCTCTGATTTTACATCATGATGTAATCACCACTGGAGCTTCACTGTTACTAAATT ATTAATTTCTTGCCTCCAGTGTTCTATCTCTGAGGCTGAGCATTATAAGAAAATGACCTCTGCTCCTTTTCATTG AGTGTTGTGAACCCCCACCCAGGCAGTATCCATGAAAGCACAAGTGACTAGTCCTATGATGTACAAAGCCTGTAT

TCGACAGCTCTCTCGCCCAGCCCAGTTCTGGAAGGGATAAAAAGGGGGCATCACCGTTCCTGGGTAACAGAGCCA CCTTCTGCGTCCTGAGCTCTGTTCTCTCCAGCACCTCCCAACCCACTAGTGCCTGGTTCTCTTGCTCCACCA GGAACAAGCCACCATGTCTCGCCAGTCAAGTGTGTCCTTCCGGAGCGGGGGCAGTCGTAGCTTCAGCACCGCCTC $\tt CGGCAGGGTCAGCCTTGCGGGTGCTTGTGGAGTGGGTGGCTATGGCAGCCGGAGCCTCTACAACCTGGGGGGGCTC$ CAAGAGGATATCCATCAGCACTAGTGGTGGCAGCTTCAGGAACCGGTTTGGTGCTGGTGCTGGAGGCGGCTATGG CTTTGGAGGTGGTGCCGGTAGTGGATTTGGTTTCGGCGGTGGAGCTGGTGGTGGCTTTGGGCTCGGTGGCGAGC TGGCTTTGGAGGTGGCTTCGGTGGCCCTGGCTTTCCTGTCTGCCCTCCTGGAGGTATCCAAGAGGTCACTGTCAA CCAGAGTCTCCTGACTCCCCTCAACCTGCAAATCGACCCCAGCATCCAGAGGGTGAGGACCGAGGAGCGCGAGCA GATCAAGACCCTCAACAATAAGTTTGCCTCCTTCATCGACAAGGTGCGGTTCCTGGAGCAGCAGAACAAGGTTCT GGACACCAAGTGGACCCTGCTGCAGGAGCAGGGCACCAAGACTGTGAGGCAGAACCTGGAGCCGTTGTTCGAGCA GTACATCAACAACCTCAGGAGGCAGCTGGACAGCATCGTGGGGGAACGGGGCCGCCTGGACTCAGAGCTGAGAAA CATGCAGGACCTGGTGGAAGACTTCAAGAACAAGTATGAGGATGAAATCAACAAGCGTACCACTGCTGAGAATGA GTTTGTGATGCTGAAGAAGGATGTAGATGCTGCCTACATGAACAAGGTGGAGCTGGAGGCCAAGGTTGATGCACT GATGGATGAGATTAACTTCATGAAGATGTTCTTTGATGCGGAGCTGTCCCAGATGCAGACGCATGTCTCTGACAC CTCAGTGGTCCTCCCATGGACAACAACCGCAACCTGGACCTGGATAGCATCATCGCTGAGGTCAAGGCCCAGTA TGAGGAGATTGCCAACCGCAGCCGGACAGAAGCCGAGTCCTGGTATCAGACCAAGTATGAGGAGCTGCAGCAGAC AGCTGGCCGGCATGGCGATGACCTCCGCAACACCAAGCATGAGATCTCTGAGATGAACCGGATGATCCAGAGGCT GAGAGCCGAGATTGACAATGTCAAGAAACAGTGCGCCAATCTGCAGAACGCCATTGCGGATGCCGAGCAGCGTGG GGAGCTGGCCCTCAAGGATGCCAGGAACAAGCTGGCCGAGCTGGAGGAGGCCCTGCAGAAGGCCAAGCAGGACAT GGCCCGGCTGCTGCGTGAGTACCAGGAGCTCATGAACACCAAGCTGGCCCTGGACGTGGAGATCGCCACTTACCG CAAGCTGCTGGAGGGCGAGGAATGCAGACTCAGTGGAGAAGGAGTTGGACCAGTCAACATCTCTGTTGTCACAAG CAGTGTTTCCTCTGGATATGGCAGTGGCAGTGGCTATGGCGGTGGCCTCGGTGGAGGTCTTGGCGGCGGCCTCGG TGGAGGTCTTGCCGGAGGTAGCAGTGGAAGCTACTACTCCAGCAGCAGTGGGGGTGTCGGCCTAGGTGGTGGGCT CAGTGTGGGGGGCTCTGGCTTCAGTGCAAGCAGTGGCCGAGGGCTGGGGGTGGGCTTTGGCAGTGGCGGGGTAG CAGCTCCAGCGTCAAATTTGTCTCCACCACCTCCTCCTCCCGGAAGAGCTTCAAGAGCTAAGAACCTGCTGCAAG TCACTGCCTTCCAAGTGCAGCAACCCAGCCCATGGAGATTGCCTCTTCTAGGCAGTTGCTCAAGCCATGTTTTAT CCTTTTCTGGAGAGTAGTCTAGACCAAGCCAATTGCAGAACCACATTCTTTGGTTCCCAGGAGAGCCCCATTCCC AGCCCCTGGTCTCCCGTGCCGCAGTTCTATATTCTGCTTCAAATCAGCCTTCAGGTTTCCCACAGCATGGCCCCT GCTGACACGAGAACCCAAAGTTTTCCCAAATCTAAATCATCAAAACAGAATCCCCACCCCAATCCCAAATTTTGT TTTGGTTCTAACTACCTCCAGAATGTGTTCAATAAAATGCTTTTATAATAT

3890/6881 FIGURE 3582

3891/6881 FIGURE 3583

3892/6881 FIGURE 3584

GAAACATGCAGGACCTGGTGGAAGACTTCAAGAACAAGTATGAGGATGAAATCAACAAGCGTACCACTGCTGAGA
ATGAGTTTGTGATGCTGAAGAAGGATGTAGATGCTGCCTACATGAACAAGGTGGAGCCGAGGCCAAGGTTGATG
CACTGATGGATGAGAATTAACTTCATGAAGATGTTCTTTGATGCGGAGCTGTCCCAGATGCAGACGCATGTCTCTG
ACACCTCAGTGGTCCTCTCCATGGACAACAACCGCAACCTGGACCTGGATAGCATCATCGCTGAGGTCAAGGCCC
AGTATGAGGAGATTGCCAACCGCAGCCGGACAGAAGCCGAGTCCTGGTATCAGACCAAGTCCGCAACACCAAGCA
TGAGATCTCTGAGATGAACCGGATGATCCAGAGGCTGAGAGCCGAGATTGACAATGTCAAGAAACAGTGCGCCAA
TCTGCAGAACGCCATTGCGGATGCCGAGCAGCAGGAGCTGGCCCTCAAGGATGCCAGGAACAAGCTGGCCGA
GCTGGAGGAGGCCCTGCAGAAGGCCAAGCAGGACATGGCCCGGCTGCTGCGTGAGTACCAGGAGCTCATGAACAC
CAAGCTGGCCCTGGACGTGGAGATCGCCACTTACCGCAAGCTGCTGGAGGGCGAGAATGCAGACTCAGTGGAGA
AGGAG

3893/6881 FIGURE 3585

CGTCTCCTGCTACCGCGCCTCACCGGAGGCTTCGGCAGCCACAGCGTGTGCGGGGGGCTTCCGCCCGGCCCGGCTCCTG CGGACGCAGCTTCGGCTACCGCTCCGGGGGCGTGTGCGGACCCAGCCCCCCATGCATCGCCACCGTGTCGGTCAA GGAGACAAAGCTGCAGTTCTTCCAGAACCGTGAGTGCTGCAAGAGCAACCTGGAGCCTCTGTTTGAGGGCTACAA CTCTGCGACGGGAGGCCGAGTGCATGGAAGCCAACAGTGGGAGGCTGGCCTCAGAGCTCAACCACGTGCAGGAGG TGCTGGAGGGTTACAAGAAGAAGTATGAGGAGGAGGTTTCTCTGAGAGCAACAGCTGAGAACGAGTTTGTGGCTT TGAAGAAGGATGTGGACTGCGCCTACCTCCGCAAGTCAGACCTGGAGGCCAACGTGGAGGCCCTGATCCAGGAGA ${\tt TCGACTTCCTGAGGCGGCTGTATGAGGAGGAGATCCTCATTCTCCAGTCGCACATCTCAGACACCTCCGTGGTTG}$ TCAAGCTGGACAACAGCCGGGACCTGAACATGGACTGCATCATTGCCGAGATTAAGGCACAGTATGACCACATTG TCACCCGCAGCCGGGCCGAGCCCGGGTCCTGGTACCGCAGCAAGTGTGAGGAGATGAAGGCCACGGTGATCAGGC ACGGGGAGACCCTGCGCCGCACCAAGGAGGAGATCAATGAGCTGAACCGCATGATCCAAAGGCTGACGGCCGAGG TGGAGAATGCCAAGTGCCAGAACTCCAAGCTGGAGGCCGGGTGGCCCAGTCTGAGCAGCAGGGTGAGGCGGCCC TCAGGGAGTACCAGGAGGTGATGAACTCCAAGCTGGGCCTGGACATCGAGATCGCCACCTACAGGCGCCTGCTGG AGGGCGAGGAGCAGAGGCTATGTGAAGGCATTGGGGCTGTGAATGTCTGTGTCAGCAGCTCCCGGGGCGGGTCG TGTGCGGGGACCTCTGCGTGTCAGGCTCCCGGCCAGTGACTGGCAGTGTCTGCAGCGCTCCGCTGCAACGGGAAC GTGGCGGTGAGCACCGGCCTGTGTGCGCCCTGCGGCCAATTGAACACCACCTGCGGAGGGGGTTCCTGCGGCGTG GGCTCCTGTGGTATCAGCTCCCTGGGTGTGGGGTCTTGCGGCAGCTGCCGGAAATGTTAGGCACCCCAACTC CAGCTACTTCTCCTCCACTTTGAAAGACCCCTCCCACTCCTGGCCTCACATTTCTCTGTGTGATCCCCCCACTTC TGTGTTTCAATAAATTAATGTAGCC

CGGTATTCACCTCGCGCTCAGCCGCCTTCTCGGGCCGCGCGCCCCAGGTGCGCCTGAGCTCCGCTCGCCCCGGCG GCCTTGGCAGCAGCCTCTACGGCCTCGGCGCCTCACGGCCGCGTGGCCGTGCGCTCTGCCTATGGGGGGCC ${\tt CGGTGGGCGCGGCATCCGCGAGGTCACCATTAACCAGAGCCTGCTGGCCCGCTGCGGCTGGACGCCGACCCCT}$ $\verb|CCCTCCAGCGGGTGCGCCAGGAGGAGGAGCGAGCAGATCAAGACCCTCAACAACAAGTTTGCCTCCTTCATCGACA| \\$ AGGTGCGGTTTCTGGAGCAGCAGAACAAGCTGCTGGAGACCAAGTGGACGCTGCTGCAGGAGCAGAAGTCGGCCA AGAGCAGCCGCCTCCCAGACATCTTTGAGGCCCAGATTGCTGGCCTTCGGGGTCAGCTTGAGGCACTGCAGGTGG ATGGGGGCCGCCTGGAGCCGGAGCTGCGGAGCATGCAGGATGTGGTGGAGGACTTCAAGAATAAGTACGAAGATG AAATTAACCACCGCACAGCTGCTGAGAATGAGTTTGTGGTGCTGAAGAAGGATGTGGATGCTGCCTACATGAGCA AGGTGGAGCTGGAGGCCAAGGTGGATGCCCTGAATGATGAGATCAACTTCCTCAGGACCCTCAATGAGACGGAGT TGACAGAGCTGCAGTCCCAGATCTCCGACACTCTGTGGTGCTGTCCATGGACAACAGTCGCTCCCTGGACCTGG ACGGCATCATCGCTGAGGTCAAGGCGCAGTATGAGGAGATGGCCAAATGCAGCCGGGCTGAAGCCTGGT ACCAGACCAAGTTTGAGACCCTCCAGGCCCAGGCTGGGAAGCATGGGGACGACCTCCGGAATACCCGGAATGAGA TTTCAGAGATGAACCGGGCCATCCAGAGGCTGCAGGCTGAGATCGACAACATCAAGAACCAGCGTGCCAAGTTGG AGGCCGCCATTGCCGAGGCTGAGGAGCGTGGGGAGCTGGCGCTCAAGGATGCTCGTGCCAAGCAGGAGGAGCTGG $\verb|AAGCCGCCCTGCAGCGGGGCAAGCAGGATATGGCACGGCAGCTGCGTGAGTACCAGGAACTCATGAGCGTGAAGC|$ TGGCCCTGGACATCGACGTCCCCCCCCCACCTGCAGGCCGAGGAGAGCCGGTTGGCTGGAGATGGAG TGGGAGCCGTGAATATCTCTGTGATGAATTCCACTGGTGGCAGTAGCAGTGGCGGTGGCATTGGGCTGACCCTCG GGGGAACCATGGGCAGCAATGCCCTGAGCTTCTCCAGCAGTGCGGGTCCTGGGCTCCTGAAGGCTTATTCCATCC GGACCGCATCCGCCAGTCGCAGGAGTGCCCGCGAC<u>TGA</u>

MSIHFSSPVFTSRSAAFSGRGAQVRLSSARPGGLGSSSLYGLGASRPRVAVRSAYGGPVGAGIREVTINQSLLAP LRLDADPSLQRVRQEESEQIKTLNNKFASFIDKVRFLEQQNKLLETKWTLLQEQKSAKSSRLPDIFEAQIAGLRG QLEALQVDGGRLEAELRSMQDVVEDFKNKYEDEINHRTAAENEFVVLKKDVDAAYMSKVELEAKVDALNDEINFL RTLNETELTELQSQISDTSVVLSMDNSRSLDLDGIIAEVKAQYEEMAKCSRAEAEAWYQTKFETLQAQAGKHGDD LRNTRNEISEMNRAIQRLQAEIDNIKNQRAKLEAAIAEAEERGELALKDARAKQEELEAALQRGKQDMARQLREY QELMSVKLALDIEIATYRKLLEGEESRLAGDGVGAVNISVMNSTGGSSSGGGIGLTLGGTMGSNALSFSSSAGPG LLKAYSIRTASASRRSARD

3896/6881 FIGURE 3588

TTCCGGTCCCGGCTCAGCCTCCGACCCAGGTGGTCTGGAGCCTGCCGGGAGAGTGGTGGCATCTGAGAGGCTGGT CGTGGACTGTGGTTGGGGGAGGTGGGAGCTGTTTTAACCGTGTGCCCCCTCTCCTGTGCCGGCGTGGGCATCCCC ACCCGAGGAGTCCGTTCCTCCCTGGTTACGTGGACTGTGGAGCTGGTCTCTTGTGGCTCAGCGCCGTGCGGAGGT TGCTCCAAACTCTACACTCAAGGGTGGCCCTTGGGTAGGGTGAAGATCCCCTGTCTTTATCCTAGTTCCACACCT TGGTGTGGGTTACTGGGTGCAGGATGAACTGTCGCTCGGAGGTGCTGGAGGTGTCGGTGGAGGGGGCGGCAGGTGG AGGAGGCCATGCTGGCTGCTGCACACGGTGCTTCTGCACCGCAGCACAGGCAAGTTCCACTACAAGAAGGAGG GCACCTACTCCACTGGCACCGTGGGCACCCAGGATGTTGACTGTGACTTCATCGACTTCACTTATGTGCGTGTCT CTTCTGAGGAACTGGATCGTGCCCTGCGCAAGGTTGTTGGGGAGTTCAAGGATGCACTGCGCAACTCTGGTGGCG ATGGGCTGGGGCAGATGTCCTTGGAGTTCTACCAGAAGAAGAAGTCTCGCTGGCCATTCTCAGACGAGTGCATCC ${\tt CATGGGAAGTGTGGACGGTCAAGGTGCATGTGGTAGCCCTGGCCACGGAGCAGGAGCGGCAGATCTGCCGGGAGA}$ AGGTGGGTGAGAACTCTGCGAGAAGATCATCAACATCGTGGAGGTGATGAATCGGCATGAGTACTTGCCCAAGA TGCCCACACAGTCGGAGGTGGATAACGTGTTTGACACAGGCTTGCGGGACGTGCAGCCCTACCTGTACAAGATCT CCTTCCAGATCACTGATGCCCTGGGCACCTCAGTCACCACCACCATGCGCAGGCTCATCAAAGACACCCTTGCCC $\texttt{TC}\underline{\textbf{TGA}} \texttt{GCGTCGCTGGATCTCTGGGAGCTCCTTGATGGCTCCCAGACCTTGGCTTTTGGGAATTGCACTTTTGGGC}$ CTTTGGGCTCTGGAACCTGCTCTGGGTCATTGGTGAGACTTGGAAGGGGCAGCCCCCGCTGGCTTCTTGGTTTTG $\tt TGGTTGCCAGCCTCAGGTCATCCTTTTAATCTTTGCTGACGGTTCAGTCCTGCCTCTACTGTCTCTCCATAGCCC$ TGGTGGGGTCCCCCTTCTTTCTCCACTGTACAGAAGAGCCACCACTGGGATGGGGAATAAAGTTGAGAACATG

3897/6881 FIGURE 3589

MNCRSEVLEVSVEGRQVEEAMLAVLHTVLLHRSTGKFHYKKEGTYSTGTVGTQDVDCDFIDFTYVRVSSEELDRA LRKVVGEFKDALRNSGGDGLGQMSLEFYQKKKSRWPFSDECIPWEVWTVKVHVVALATEQERQICREKVGEKLCE KIINIVEVMNRHEYLPKMPTQSEVDNVFDTGLRDVQPYLYKISFQITDALGTSVTTTMRRLIKDTLAL

3898/6881 FIGURE 3590

ATGAGCAGACAAGCCAGCAAGACATCTGGTGGCGGGAGCCAGGGTTTCTCCGGCCGCTCTGCTGTGGTCTCCGGC AGCAGCAGGATGAGCTGTGTGGCCCACTCTGGGGGAGCTGGCGGAGGGGGCCTATGGCTTCCGGAGCGGAGCAGGT GGCTTTGGCAGTCGCAGCCTCTACAACCTGGGCGGCAACAAGAGCATCTCCATCAGCGTGGCAGCTGGCGGCTCC ${\tt TATGGAGGTGGCTTTGGTGGTGGCAGAGGAATGGGAGGTGGCTTTGGTGGAGCTGGTGGCTTT}$ GGAGGGCTGGTGGCTTTGGAGGGGCTGGTGGCTTTGGTGGTCCTGGTGGCTTTGGT GGGCCTGGCAGCTTGGGCAGTCCTGGTGGCTTTGGCCCTGGGGGGCTTTCCTGGGGGGAATTCAGGAAGTGACTATC AACCAGAGTCTCCTGCAGCCCCTCAATGTGGAGATCGACCGCCAGATTGGGCAAGTAAAGGCCCAGGAGCGGAAA CAGATCAAGACCCTCAACAACAAGTTTGCCTCCTTCATTGACAAGGTGCGGTTCCTGGAGCAACAGAACAAAGTC TTTGAGAATCACATCAACTACCTGCGGAGCTACCTGGACAACATCCTCGGGGAGAGAGGGGCGCCTGGACTCTGAG CTGAAGAACATGGAGGACCTGGTGGAAGACTTCAAGAAGAATATGAGGATGAAATCAATAAACGTACAGCTGCT GAGAATGAATTTGTGACTCTGAAGAAGGATGTGGACAGTGCCTATATGAACAAGGTGGAGCTTCAGGCCAAAGTG GATGCCTTGATAGATGAGATCGACTTCTTAAGGACCCTCTACGACGCTGAGCTATCTCAGATGCAGAGCCACATC AGTGACACATCTGTGGTGCTGTCCATGGACAATAATCGCTCCCTGGACCTGGACAGCATCATTGCTGAAGTTCGT GCACAGTATGAGGATATCGCTCAGAGAAGCAAGGCCGAAGCTGAGGCCCTGTACCAGACCAAGTTGGGGGAGCTG CAGACCACGGCTGGCAGGCATGGGGATGACCTAAGAAATACCAAGAGCGAGATCATAGAGCTCAACAGAATGATC CAGAGGCTGCGGGCAGAGATCGAGGGTGTCAAGAAGCAGAATGCCAACCTGCAGACGGCCATTGCCGAGGCCGAG CAGCATGGAGAGATGCCCTCAAGGATGCCAATGCCAAGCTCCAAGAGCTGCAGGCTGCTCTACAGCAGGCGAAG GATGACCTGGCGCGGCTGCTACGTGACTACCAGGAGCTGATGAATGTCAAGCTGGCCCTGGACGTGAGATCCCCC ${\tt CCTACCGCAGCTGCTGGAGGGCGAGGAGTACAGCAGGATGTCTGGAGAGTGTCCGAGTGCTGTCAGCATCTCCGT}$ GGTCAGCAGCAGCACGACTTCCGCCTCCGCAGGTGGCTATGGAGGAGGTTACGGCGGAGGCATGGGCGGTGGTTT ATTTGGCGGCGGCAGCAGCGGTTTCAGCGGTGGCAGCGGCTTTGGCTCCATCTCTGGCGCCCGCTATGGAGTCAG TGGCGGGGGCTTCAGCTCGGCCAGCAACCGGGGCGGCAGCATCAAGTTCTCCCAGTCCTCCCAGTCCTCCCAGCG CTACTCCAGATAAAGAGCACGCATCAGCATCGCAGCCACTCCAGCGCCTCCCCTCCGCTCCCCACGCCCCCATAT TGGCAACACCCCCAGCGCCACCCCATGCTCCCCAAGAACGCGGCTCTGCGCTGGAAGGCTTGTGGCCTCTTGCTC $\tt CTCCTTCCAGATCCCCGGCCAAGCCCAGTCACGAGAATTTCAGGCTCTTCTCTCCGGCTCCAGCCTGTGCCTGTG$ CTCTGATGTATATAGCACACAGCCCCCTCCGCCCCTCCGGTCTGTCGCCAATAAA

CCCAGAAGTCCTACAAGGTGTCCACCTCTGGCCCCCGGGCCTTCAGCAGCCGCTCCTACACGAGTGGGCCCGGTT CCCGCATCAGCTCCTCGAGCTTCTCCCGAGTGGGCAGCAGCAACTTTCGCGGTGGCCTGGGCGGCGGCTATGGTG GGGCCAGCGGCATGGGAGGCATCACCGCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCCTGGAGGTGG ACCCCAACATCCAGGCCGTGCGCACCCAGGAGAAGGAGCAGATCAAGACCCTCAACAACAAGTTTGCCTCCTTCA TAGACAAGGTACGGTTCCTGGAGCAGCAGAACAAGATGCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGA CGGCTCGAAGCAACATGGACAACATGTTCGAGAGCTACATCAACAACCTTAGGCGGCAGCTGGAGACTCTGGGCC AGGAGAAGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGGGGCTGGTGGAGGACTTCAAGAACAAGTATGAGG ATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTCCTCATCAAGAAGGATGTGGATGAAGCTTACATGA ACAAGGTAGAGCTGGAGTCTCGCCTGGAAGGGCTGACCGACGAGATCAACTTCCTCAGGCAGCTATATGAAGAGG AGATCCGGGAGCTGCAGTCCCAGATCTCGGACACATCTGTGGTGCTGTCCATGGACAACAGCCGCTCCCTGGACA TGGACAGCATCATTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCGCAGCCGGGCTGAGGCTGAGAGCA AGATCTCTGAGATGAACCGGAACATCAGCCGGCTCCAGGCTGAGATTGAGGGCCTCAAAGGCCAGAGGGCTTCCC TGGAGGCCGCCATTGCAGATGCCGAGCAGCGTGGAGAGCTGGCCATTAAGGATGCCAACGCCAAGTTGTCCGAGC TGGAGGCCGCCTGCAGCGGGCCAAGCAGGACATGGCGCGGCAGCTGCGTGAGTACCAGGAGCTGATGAACGTCA AGCTGGCCCTGGACATCGAGATCGCCACCTACAGGAAGCTGCTGGAGGGGGGGAGGAGCCGGCTGGAGTCTGGGA TGCAGAACATGAGTATTCATACGAAGACCACCAGCGGCTATGCAGGTGGTCTGAGCTCGGCCTATGGGGGCCTCA ${\tt CAAGCCCCGGCCTCAGCTACAGCCTGGGCTCCAGCTTTGGCTCTGGCGCGGGCTCCAGCTCCTTCAGCCGCACCA}$ GCTCCTCCAGGGCCGTGGTTGTGAAGAAGATCGAGACACGTGATGGGAAGCTGGTGTCTGAGTCCTCTGACGTCC TGCCCAAG<u>TGA</u>ACAGCTGCGGCAGCCCTCCCAGCCTACCCTCCTGCGCTGCCCCAGAGCCTGGGAAGGAGGCC GCTATGCAGGGTAGCACTGGGAACAGGAGACCCACCTGAGGCTCAGCCCTAGCCCTCAGCCCACCTGGGGAGTTT AAAACCTCAGCTAGCTCTGCCAAACCC

3900/6881 FIGURE 3592

MSIRVTQKSYKVSTSGPRAFSSRSYTSGPGSRISSSSFSRVGSSNFRGGLGGGYGGASGMGGITAVTVNQSLLSP
LVLEVDPNIQAVRTQEKEQIKTLNNKFASFIDKVRFLEQQNKMLETKWSLLQQQKTARSNMDNMFESYINNLRRQ
LETLGQEKLKLEAELGNMQGLVEDFKNKYEDEINKRTEMENEFVLIKKDVDEAYMNKVELESRLEGLTDEINFLR
QLYEEEIRELQSQISDTSVVLSMDNSRSLDMDSIIAEVKAQYEDIANRSRAEAESMYQIKYEELQSLAGKHGDDL
RRTKTEISEMNRNISRLQAEIEGLKGQRASLEAAIADAEQRGELAIKDANAKLSELEAALQRAKQDMARQLREYQ
ELMNVKLALDIEIATYRKLLEGEESRLESGMQNMSIHTKTTSGYAGGLSSAYGGLTSPGLSYSLGSSFGSGAGSS
SFSRTSSSRAVVVKKIETRDGKLVSESSDVLPK

3901/6881 FIGURE 3593

GGGTCCGGGGGCCTGGCCACCGGGATAGCCGGGGGTCTGGCAGGAATGGGAGGCATCCAGAACGAGAAGGAGACCC ATGCAAAGCCTGAACGACCGCCTGGCCTCTTACCTGGACAGAGTGAGGAGCCTGGAGAACCGAGAACCGGAGGCTG GAGAGCAAAATCCGGGAGCACTTGGAGAAGAAGGGACCCCAGGTCAGAGACTGGAGCCATTACTTCAAGATCATC ${\tt GAGGACCTGAGGGCTCAGATCTTCGCAAATACTGTGGACAATGCCCGCATCGTTCTGCAGATTGACAATGCCCGT}$ CTTGCTGCTGATGACTTTAGAGTCAAGTATGAGACAGAGCTGGCCATGCGCCAGTCTGTGGAGAACGACATCCAT GGGCTCCGCAAGGTCATTGATGACACCAATATCACACGACTGCAGCTGGAGACAGAGATCGAGGCTCTCAAGGAG GAGCTGCTCTTCATGAAGAAGAACCACGAAGAGGAAGTAAAAGGCCTACAAGCCCAGATTGCCAGCTCTGGGTTG ACCGTGGAGGTAGATGCCCCCAAATCTCAGGACCTCGCCAAGATCATGGCAGACATCCGGGCCCAATATGACGAG CTGGCTCGGAAGAACCGAGAGGAGCTAGACAAGTACTGGTCTCAGCAGATTGAGGAGAGCACCACAGTGGTCACC ACACAGTCTGCTGAGGTTGGAGCTGCTGAGACGACGCTCACAGAGCTGAGACGTACAGTCCAGTCCTTGGAGATC CAGATGGAGCAGCTCAACGGGATCCTGCTGCACCTTGAGTCAGAGCTGGCACAGACCCGGGCAGAGGGACAGCGC CAGGCCCAGGAGTATGAGGCCCTGCTGAACATCAAGGTCAAGCTGGAGGCTGAGATCGCCACCTACCGCCGCCTG ACCACCGCCGGATAGTGGATGGCAAAGTGGTGTCTGAGACCAATGACACCAAAGTTCTGAGGCAT<u>TAA</u>GCCAGC AGAAGCAGGGTACCCTTTGGGGAGCAGGAGGCCAATAAAAAGTTCAGAGTTCATTGGATGTC

MSFTTRSTFSTNYRSLGSVQAPSYGARPVSSAASVYAGAGGSGSRISVSRSTSFRGGMGSGGLATGIAGGLAGMG GIQNEKETMQSLNDRLASYLDRVRSLETENRRLESKIREHLEKKGPQVRDWSHYFKIIEDLRAQIFANTVDNARI VLQIDNARLAADDFRVKYETELAMRQSVENDIHGLRKVIDDTNITRLQLETEIEALKEELLFMKKNHEEEVKGLQ AQIASSGLTVEVDAPKSQDLAKIMADIRAQYDELARKNREELDKYWSQQIEESTTVVTTQSAEVGAAETTLTELR RTVQSLEIDLDSMRNLKASLENSLREVEARYALQMEQLNGILLHLESELAQTRAEGQRQAQEYEALLNIKVKLEA EIATYRRLLEDGEDFNLGDALDSSNSMQTIQKTTTRRIVDGKVVSETNDTKVLRH

AGATAAGAGCTGGACGGAGGCTAAAGCGGCAGCCCCAGCTTCGCGCCCCAGTCCCTTTCCCCTGCTGGGGA TCCCCCCTCTTCCCCGCCCACCCCTTACCCGCATGCAGCCCAGCGCCCTATGCTAGCCCTCCCCCTCCCCCCTG CTGGAGCGGGGCCCCCGGGGGAGGAGGGGGAATCGGCTGCGGGTCCTTGGTGTTTCCAGCACCCAGTTTCCCT TCAAGCCGGGTCGCGATGTACGACTGTATGGAAACGTTTGCCCCGGGTCCGCGACGGCTGTACGGGGCGGCCGGG CCCGGGGCCGGCTTGCTGCCGCAGAGCCACCGGCGCTCCTGTTTCGCCGGACTTGAATCTTTTGCCTGGCCGCAA CCCGCCAGCCTGCAATCGGTGGAGACACAGAGCACCAGCTCAGAGGAGATGGTGCCCAGCTCGCCCCCCCT CCGCCTCCTCGGGTCTACAAGCCATGCTTCGTGTGCAATGACAAGTCCTCTGGCTACCACTATGGGGTCAGCTCT TGTGAAGGCTGCAAGGGCTTCTTTCGCCGAAGCATCCAGAAGAACATGGTGTACACGTGTCACCGCGACAAAAAC TGTATCATCAACAAGGTGACCAGGAATCGCTGCCAGTACTGCCGGCTACAGAAGTGCTTCGAAGTGGGCATGTCC CTGAGCCCTCAGTTAGAAGAGCTCATCACCAAGGTCAGCAAAGCCCATCAGGAGACTTTCCCCTCGCTCTGCCAG CTGGGCAAGTATACCACGAACTCCAGTGCAGACCACCGCGTGCAGCTGGATCTGGGGCTGTGGGACAAGTTCAGT GAGCTGGCTACCAAGTGCATCAAGATCGTGGAGTTTGCCAAGCGGTTGCCTGGCTTTACAGGGCTCAGCATT GCTGACCAGATCACTCTGCTCAAAGCTGCCTGCCTAGATATCCTGATGCTGCGTATCTGCACAAGGTACACCCCA GAGCAGGACACCATGACCTTCTCCGACGGGCTGACCCTGAACCGGACCCAGATGCACAATGCCGGCTTCGGGCCC AGCGCCATCTGCCTCATCTGCGGAGACCGCATGGACCTGGAGGAGCCCGAAAAAGTGGACAAGCTGCAGGAGCCA AAAATCACCGACCTCCGGGGCATCAGCACTAAGGGAGCTGAAAGGGCCATTACTCTGAAGATGGAGATTCCAGGC CCGATGCCTCCCTTAATCCGAGAGATGCTGGAGAACCCTGAAATGTTTGAGGATGACTCCTCGCAGCCTGGTCCC CACCCCAATGCCTCTAGCGAGGATGAGGTTCCTGGGGGCCAGGGCAAAGGGGGCCTGAAGTCCCCAGCCTGACCA GGGCCCCTGACCTCCCGCTGTGGGGGTTGGGGCTTCAGGCAGCAGACTGACCATCTCCCAGACCGCCAGTGACT GGGGGAGGACCTGCTCTCCCCACCCCTTCCAATGAGCTCCTTGTTTTTGCCAAAGTTTCTAGGGGTGC CTCTGTGTTCATCCCCTTCCTGATCTAACCGGCTCCCTCGCCAGTCCCGGGGGCCTGCCCTGCTCCCACCAGGAG AGAGGGCAAAGGGATGAGCCTGGGTTTGGACTCTAAAATCTCAGCACTGCCCCATGGGTCCTAGACTTCCCAGGG CAAGAGGAAGACCCTGCCATTCCACAGCCCCTTCCTCTGCCAGGTGCTTGGCTCTCTGAGAGCAAACAGGAACAC TAGAGACCAAAAAGGGGACAAAGGAGAAGGGCTGAGCCCACCTTCTTGCTCCTACCCTTGGTGCCTAATGCTGTG TGATGCACCTGCAGGTGTGCTAGCCTCTGTGCCCCGTCCTTGTGCCAGGTCAAGGTGGGGGCAGGCTGGGCC TCCATCTCAGCCATTGGGGCAGGGACCCTCCTACACTACAGAGGGGCCAGGGGATCCCTCTCTCCCTAGTGCCTT CCACCCTTTACTCCCCAGAGCAGCTTGGCCCAGGGAGGGGGGGTGCTTAGCTGATCCCGCCCTGACCCAGAG AGCCCAGGGCCCCTGTGACCCCTCCTTTCTTCCTCCAATCCCCAGTTTGTATTTAGCTGCCAAATAAGATTCCCA TTGGCTCCCTGTGTTCTCTTGGGGGGTCAGGGTGCTGTCCCCTCCCCTCTGTTTACATCTCCCCTCTACCCCGCT GTATCGCATATTGCTGAGTTTTCTATTTTTGCAAAATAAAGTGATGGAAACTC

AGTTTCTAAGGATCATGTCTGCGAGCCAGGATTCCTGATCCAGAGACAACGGCCCCAATGGGATCGAGCCCAAAG GTGTCATTGAGAGTAACTGGAATGAGATTGTTGACAGCTTTGATGACATGAACCTCTCAGAGTCCCTTCTCCGTG GCATCTACGCCTATGGTTTAGAGAAGCCGTCTGCCATCCAGCAGCGAGCCATTCTACCTTGTATCAAGGGTTATC ACGTGATTGCTCAAGCCCAATCTGGGGCTGGGAAAATGGCCACATTTGCCATATTGATTCTGCAGCAGATTGAAT TAGATCTAAAAGCCACCCAGGCCTTGCTCCTAGCACCCACTCAAGAATTGGCTCAGCAGATACAGAAGGTGGTCA TGGCACTAGGAGACTACATGGGTGCCTCTTGTCATGCCTGTATCAGGGGCCACCAACATGCGTGCTGAGGTGCAGA ${\tt AACTGCAGAGCTCCTCACATCATTGTGGGTACCCCTGGCCATGTGTTTGATATGCTTAACGGGAGATACCT}$ GTCTCCCAAATACATCAAGATGTTTGTACTGGACGAAGCTGACGAAATGTTAAGCCGTGGATTCAAGGACCAGAT CTATGACATATTCCAAAAGCTCAACAGCAACACCCAGGTAGTTTTGCTGTCAGCTGCGATGCCTTCTGATGTGCT CCGCCAATTCTACATCAATTTGGAACGAGAGGAGTGGAAGCTGGACACACTATGTGACTTGTATGAAACCCTGAC ATTTCACTGTCTTCACCATTCGTGGAGATATGGACCAAAACGAACAAGACGTGATCTTGAGGGAGTTTCGTTATG GCTCTAGCAGTTTTGATTACCACTGACCTGCCGGCCAGAGGCATTGATGTGCAACAGGTTTCTTTAGTCACCAAC TATGACCTTCCCACCAACAGGGAAAACCATATCCATAGAATCGGTCGAGGTGGACGGTTTGGCCGTAAAGGTGTG GCTATTAACGTGGTGACAGAAGAAGACAAGAGGACTCTTCGAGACATCGAGATCTTCTACAACTCCTCCATTGAG AAATGTCACTTTTTGAGGCAAAA

 ${\tt MEPKGVIESNWNEIVDSFDDMNLSESLLRGIYAYGLEKPSAIQQRAILPCIKGYHVIAQAQSGAGKMATFAILIL}\\ QQIELDLKATQALLLAPTQELAQQIQKVVMALGDYMGASCHACIRGTNMRAEVQKLQTKLLTSLWVPLAMCLICL\\ TGDTCLPFGFLSRRKC$

GGAGGACTGGGTGCGCGTGCAGGGATCGGAAGCCGGTTGGAGTGTGTGAGGTTTTCTCGCTCTAGGGAGATTCTT GGAAAAGCTAAAGAGCCACCATTTGTACCCGTTGGAATAGCAGGTTTTGCAGCAATTGTTGCATATGGATTATAC AAACTGAAGAGCAGGGGAAATACTAAAATGTCCATTCATCTGATCCACATGCGTGTGGCAGCCCAAGGCTTTGTT GTAGGAGCAATGACTGTTGGTATGGGCTACTTCATGTATCGGGAATTCTGGGCAAAACCTAAGCCTTAGAAGAAG AAATAAACTAATTTGTATGGGTTTAGATGGTAACATGGCATTTTGAATATTGGCTTCCTTTCTTGCAGGCTTGAT TCAACTAAACGCACTTGATGGTGTTGAAATGTCCACCTTCTTAAATTTTTTAAGATGAACTGAGTTCTAAAGAAGA TAACAGGCCAATCCTGAAGGTACTCCCAGTTTGCTGCAGAATCTCACATATTTTGGATGTTGTATAAGAGTCCTA TTTGCCCCAGTTAATTCAACTTTTGTCTGCCTGTTCTGTGGACTGGCTCTGTTAGAACTCTGTCCAAAAAG TGCATGGAATATAACTTGTAAAGCTTCCCACAATTGACAATATATGTGCATGTGTTTAAGCCAAATCCAGAAAGC TTAAACAATAGAGCTGCATAATAGTATTTATTAAAGAATCACAACTGTAAACATGAGAATAACTTAAGGATTCTA GTTTAGTTTTTTGTAATTGCAAATTATATTTTTGCTGCTGATATATTTAGAATAATTTTTAAATGTCATCTTGAAA TAGAAATATGTATTTTAAGCACTCATGCAAAGGTAAATGAACACTTTTTAAATGTGTGTTGCTTATTTTTTCCAT AAGAATTGTAAACATTGAACTGAACAAATTACCTATAATGGATTTGATTAATGACTAATGAGCAAGCGGGTTTGG CCAGACAGTATACCCAAACTTTTATATAGTATACAGAAGGCTATCACACTTGTGAAATTCTCTTGTCTAATCCGA

MTPHRLLPPLLLLALLLAASPGGALARCPGCGQGVQAGCPGGCVEEEDGGSPAEGCAEAEGCLRREGQECGVYT PNCAPGLQCHPPKDDEAPLRALLLGRGRCLPARAPAVAEENPKESKPQAGTARPQDVNRRDQQRNPGTSTTPSQP NSAGVQDTEMGPCRRHLDSVLQQLQTEVYRGAQTLYVPNCDHRGFYRKRQCRSSQGQRRGPCWCVDRMGKSLPGS PDGNGSSSCPTGSSG

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GCTGGCCGTCTGCGCACCCTCTCCCCCTCGGCTCTTTCCTAGGAAAGCTGAGCCTCATAGCTTCCGGGAGAAGG TTTTCCGGAAGAAACCTCCAGTCTGTGCAGTATGTAAGGTGACCATCGATGGGACAGGCGTTTCGTGCAGAGTCT GGCGAAACACGGCCCCAGTCAGGCGCATAGAGCACCTGGGATCCACCAAATCTCTGAACCACTCAAAGCAGCGCA GCACTCTGCCCAGGAGCTTCAGCCTGGACCCGCTCATGGAGCGGCGCTGGGACTTAGACCTCACCTACGTGACGG AGCGCATCTTGGCCGCCGCCCCCCGCGCGCCCGATGAACAGCGGCACCGGGGCCACCTGCGCGAGCTGGCCC ATGTGCTGCAATCCAAGCACCGGGACAAGTACCTGCTCTTCAACCTTTCAGAGAAAAGGCATGACCTGACCCGCT TAAACCCCAAGGTTCAAGACTTCGGCTGGCCTGAGCTGCATCTCCACCCCTGGACAAGCTGTGCTCCATCTGCA TTGGGGTCATCGTTTCTGCCTACATGCACTACAGCAAGATCTCTGCAGGGGCGGACCAGGCACTGGCCACTCTTA CCATGCGGAAATTCTGCGAGGACAAGGTGGCCACAGAACTGCAGCCCTCCCAGCGTCGATATATCAGCTACTTCA GTGGGCTGCTATCTGGCTCCATCAGAATGAACAGCAGCCCTCTCTTCCTGCACTATGTGCTCATCCCCATGCTGC CAGCCTTTGAACCTGGCACAGGCTTCCAGCCCTTCCTTAAAATCTACCAGTCCATGCAGCTTGTCTACACATCTG ATGTCATGGTAACATGTTATCACAAGGGTGGCCGGGGCACAGACCGGACCCTCGTGTTCCGAGTCCAGTTCCACA GGCCTCCCCGGCAGACCCCCCGGCACCCTCTCCAGAGCCTCCACCCCCCATGCTCTCTGTCAGCAGCGACT GGCAGGAGCTGGATCGCCTCCTAGGAGGCTGCGGAGTGGCCAGTGGGGGCCCGGGGAGCTGGGCGAGACGGCCA TCCTAGATGACGAAGAGCAGCCCACTGTGGGCGGAGGCCCCCACCTCGGAGTGTATCCAGGCCATAGGCCTGGCC TCAGCCGCCACTGCTCCTGCCGCCAGGGCTACCGGGAGCCCTGCGGGGTTCCCAATGGGGGGCTACTACCGGCCAG AGGGAACCCTGGAGAGGGGGCGACTGGCCTACGGGGGCTATGAGGGATCCCCCAGGGCTACGCCGAGGCCTCGA TGGAGAAGAGGCGCCTCTGCCGATCGCTGTCAGAGGGGCTATACCCCTACCCACCTGAGATGGGGAAACCAGCCA CTGGGGACTTTGGCTACCGCGCCCCAGGCTACCGGGAGGTGGTCATCCTGGAGGACCCTGGGCTGCCCTAT CTGGAGAAGGGTGGGCAAGTGAGGCTGGCAAGCCTCTCCTGCACCCAGTGCGGCCTGGGCACCCGCTGCCTCTGC AAGGGCACGAGGGCTGCTCCTACACCATGTGCCCCGAAGGCAGGTATGGGCATCCAGGGTACCCTGCCCTGGTGA CATACAGCTATGGAGGAGCAGTTCCCAGTTACTGCCCAGCATATGGCCGTGTGCCTCATAGCTGTGGCTCTCCAG GCACACTGCCTCGGTCTCCCCGAGATGCCCCATGCAGTGCTTCGTCAGAGTTGTCTGGTCCCTCCACGCCCCTGC ACACCAGCAGTCCAGGCCAAGGAAAGCACCCGGCGACAGGACACCAGGTCCCCCACCTCAGCGCCCACTC AGGAAAGGAGTCCAGGGGGCCACTCAGATGGCGCCAGTCCTCGGAGCCCTGTGCCCACCACACTTCCTGGCCTCC GCCACGCCCCTGGCAAGGCCCTCGAGGCCCCCGACAGCCCAGATGGGTCTCCCCTCACTCCTGTGCCTTCCC AGATGCCCTGGCTTGTGGCCAGCCCAGAGCCGCCTCAGAGCTCACCTACACCTGCTTTCCCCCTGGCTGCCTCCT ATGACACCAATGGCCTTAGCCAGCCCCCACTTCCTGAGAAACGCCACCTGCCCGGGCCGGGCCAACAGCCAGGAC ATAATGTCCCCCAAACCCCAGAGCCTCCTACACAAGAGGAGCCAAAGCAATGTCAAGTTTGTCCAGGATACATCCA AGTTCTGGTACAAGCCACCTGTCCCGTGACCAAGCCATTGCCCTGCTGAAGGACAAGGACCCTGGGGCCTTCC

3911/6881 FIGURE 3602B

MKSSGPVERLLRALGRRDSSRAASRPRKAEPHSFREKVFRKKPPVCAVCKVTIDGTGVSCRVCKVATHRKCEAKV TSACQALPPVELRRNTAPVRRIEHLGSTKSLNHSKORSTLPRSFSLDPLMERRWDLDLTYVTERILAAAFPARPD EQRHRGHLRELAHVLQSKHRDKYLLFNLSEKRHDLTRLNPKVQDFGWPELHAPPLDKLCSICKAMETWLSADPQH VVVLYCKGNKGKLGVIVSAYMHYSKISAGADQALATLTMRKFCEDKVATELQPSQRRYISYFSGLLSGSIRMNSS PLFLHYVLIPMLPAFEPGTGFQPFLKIYQSMQLVYTSGVYHIAGPGPQQLCISLEPALLLKGDVMVTCYHKGGRG TDRTLVFRVQFHTCTIHGPQLTFPKDQLDEAWTDERFPFQASVEFVFSSSPEKIKGSTPRNDPSVSVDYNTTEPA VRWDSYENFNQHHEDSVDGSLTHTRGPLDGSPYAQVQRPPRQTPPAPSPEPPPPPMLSVSSDSGHSSTLTTEPAA ESPGRPPPTAAERQELDRLLGGCGVASGGRGAGRETAILDDEEQPTVGGGPHLGVYPGHRPGLSRHCSCRQGYRE PCGVPNGGYYRPEGTLERRRLAYGGYEGSPQGYAEASMEKRRLCRSLSEGLYPYPPEMGKPATGDFGYRAPGYRE VVILEDPGLPALYPCPACEEKLALPTAALYGLRLEREAGEGWASEAGKPLLHPVRPGHPLPLLLPACGHHHAPMP DYSCLKPPKAGEEGHEGCSYTMCPEGRYGHPGYPALVTYSYGGAVPSYCPAYGRVPHSCGSPGEGRGYPSPGAHS PRAGSISPGSPPYPQSRKLSYEIPTEEGGDRYPLPGHLASAGPLASAESLEPVSWREGPSGHSTLPRSPRDAPCS ASSELSGPSTPLHTSSPVQGKESTRRQDTRSPTSAPTQRLSPGEALPPVSQAGTGKAPELPSGSGPEPLAPSPVS ${\tt PTFPPSSPSDWPQERSPGGHSDGASPRSPVPTTLPGLRHAPWQGPRGPPDSPDGSPLTPVPSQMPWLVASPEPPQ}$ SSPTPAFPLAASYDTNGLSQPPLPEKRHLPGPGQQPGPWGPEQASSPARGISHHVTFAPLLSDNVPQTPEPPTQE SQSNVKFVQDTSKFWYKPHLSRDQAIALLKDKDPGAFLIRDSHSFQGAYGLALKVATPPPSAQPWKGDPVEQLVR HFLIETGPKGVKIKGCPSEPYFGSLSALVSOHSISPISLPCCLRIPSKDPLEETPEAPVPTNMSTAADLLRQGAA ${\tt CSVLYLTSVETESLTGPQAVARASSAALSCSPRPTPAVVHFKVSAQGITLTDNQRKLFFRRHYPVNSITFSSTDP}$ QDRRWTNPDGTTSKIFGFVAKKPGSPWENVCHLFAELDPDQPAGAIVTFITKVLLGQRK

AATCTAGCCCGGGAACCGAGTTGCGGGAGTGCGGTCTGTGCCGTTCCGGCCAGGAGTTTGCCGACTGCAGACGTC CTGCGAACCGGCAAGATGTGCTCTCTGGGGTTGTTCCCTCCTCCACCGCCTCGGGGTCAAGTCACCCTATATGAG CCTGTCCTACAACTGACAAAGGATCCCCTAAAGACCCCTGGAAGGCTGGACCATGGCACAAGAACTGCCTTCATC CATCACCGGGAGCAAGTGTGGAAGAGATGCATCAACATTTGGCGTGATGTGGGCCTTTTTTGGGGTGCTAAATGAA ATTGCAAACTCAGAAGAAGAGGTGTTTGAGTGGGTGAAGACGGCATCCGGCTGGGCCCTGGCACTCTGTCGATGG GCCTCTTCCCTCCATGGGTCCCTGTTCCCCCATCTGTCTCTCAGGAGCGAAGATCTGATCGCTGAATTTGCCCAA GTCACAAATTGGTCCAGCTGCTGCTTGCGTGTCTTTGCATGGCACCCCCACACAACAAGTTTGCAGTGGCCCTG GTGGCGTCTCTGGCCTGGAAGCCCCTTAGTGCCTCTGTCTTGGCTGTGGCCTGCCAGAGCTGCATTCTTATCTGG ACCCTGGACCCTACCTCCTTGTCTACCCGACCCTCTTCTGGCTGTGCCCAAGTGCTGTCTCACCCTGGGCATACA GTATGGGATGTCTCAACAGAGACCTGTGTCCCCCTTCCCTGGTTCCGAGGAGGTGGGGTGACCAACCTGCTCTGG TCCCCAGACGGCAGCAAAATCCTGGCTACCACTCCTTCAGCTGTCTTTCGAGTCTGGGAGGCCCAGATGTGGACT $\tt TGTGAGAGGTGGCCTACTCTATCAGGGGGGCTGTCAGACTGGCTGCTGGAGCCCAGATGGCAGCCGACTGCTGTTC$ ACTGTATTGGGAGAGCCACTGATTTACTCCCTGTCTTTTCCAGAACGTTGTGGTGAGGGAAAGGGGTGCGTTGGA GGTGCAAAGTCAGCAACGATTGTGGCAGATCTGTCTGAGACAACAATACAGACACCAGATGGTGAGGAGAGGCTT GGGGGAGAGGCTCACTCCATGGTCTGGGACCCCAGTGGGGAACGTCTGGCTGTGCTTATGAAAGGAAAGCCAAGG GTACAGGATGGTAAACCAGTCATCCTCTTTTTCGCACTCGAAACAGCCCTGTGTTTTGAGCTCCTTCCCTGTGGC ATTATCCAGGGGGAGCCAGGCCCAGCCCAGCTCATCACTTCCATCCTTCAACAAAGGGGCCCTGCTC AGTGTGGCTGGTCCACAGGCCGAATTGCCCACATCCCGCTGTACTTTGTCAATGCCCAGTTTCCACGTTTTAGC CCAGTGCTTGGGCGGGCCCAGGAACCCCTGCTGGGGGTGGAGGCTCTATTCATGACCTGCCCCTCTTTACTGAG ACATCCCCAACCTCTGCCCCTTGGGACCCTCTCCCAGGGCCACCACCTGTTCTGCCCCACTCCCCACATTCCCAC CTCTAAGAATAAATTTTCCTTTTGTTTTCCACTCA

MCSLGLFPPPPPRGQVTLYEHNNELVTGSSYESPPPDFRGQWINLPVLQLTKDPLKTPGRLDHGTRTAFIHHREQ VWKRCINIWRDVGLFGVLNEIANSEEEVFEWVKTASGWALALCRWASSLHGSLFPHLSLRSEDLIAEFAQVTNWS SCCLRVFAWHPHTNKFAVALLDDSVRVYNASSTIVPSLKHRLQRNVASLAWKPLSASVLAVACQSCILIWTLDPT SLSTRPSSGCAQVLSHPGHTPVTSLAWAPSGGRLLSASPVDAAIRVWDVSTETCVPLPWFRGGGVTNLLWSPDGS KILATTPSAVFRVWEAQMWTCERWPTLSGRCQTGCWSPDGSRLLFTVLGEPLIYSLSFPERCGEGKGCVGGAKSA TIVADLSETTIQTPDGEERLGGEAHSMVWDPSGERLAVLMKGKPRVQDGKPVILLFRTRNSPVFELLPCGIIQGE PGAQPQLITFHPSFNKGALLSVGWSTGRIAHIPLYFVNAQFPRFSPVLGRAQEPPAGGGGSIHDLPLFTETSPTS APWDPLPGPPPVLPHSPHSHL

AACGGGATGGGGAGCTGGACCAGCAGATTATGAGCTTACAGAAAGCCTGGCCTACATTTTACTCTTTTTTGGATTT CTTCCTCATCAAGAGACTGCTGCAGTGCCTGTCATGTGACAGCGGCATGGACATATGCCCCAGGCTTTCCTGCTG GGGTCCATCCATGAGCCTGCAGGTGCCCTCATGGAGCCCCAGCCCTGCCCTGGAAGCTTGGCTGAGAGCTTCCTG GAGGAGGAGCTTCGGCTCAATGCTGAGCTGAGCCAGCTTCCGGAGCCTGTGGGCATCATCTACAATCCC GTGGAGTATGCATGGGAGCCACATCGCAACTACGTGACTCGCTACTGCCAGGGCCCCAAGGAAGTACTCTTCCTG GGCATGAACCCTGGACCTTTTGGCATGGCCCAGACTGGGGTGCCCTTTGGGGAAGTAAGCATGGTCCGGGACTGG TTGGGCATTGTGGGGCCTGTGCTGACCCCTCCCCAAGAGCATCCTAAACGACCAGTGCTGGGACTGGAGTGCCCA CAGTCAGAAGTGAGTGGTGCCCGATTCTGGGGCTTTTTCCGGAACCTCTGTGGACAGCCTGAGGTCTTCTTCCAT CCTGCCAAGCAGCAGCAGCTTCTTGGGATCTGTGATGCAGCCCTCTGCCGGCAGGTGCAGCTGCTGGGGGTG $\tt CGGCTGGTGGGAGTTGGGCAGCTGGCAGAGCAGCGGGCACGACGGGCTCTGGCAGGCCTGATGCCAGAGGTC$ CAGGTGGAAGGGCTCCTGCATCCCTCTCCCCGTAACCCACAGGCCAACAAGGGCTGGGAGGCAGTGGCCAAGGAA AGATTGAATGAGCTGGGGCTGCTGCCACTGCTGTTGAAA<u>TGA</u>GTGCCCTTGGGGCCCTTGCATGGGACACATTCAA GACCTCGAAGTCATTCTTGGCCAAGCAGATGACAACACTCTCCTGGACTGGACAAAAGGTCCTTCTGTGCACC $\tt CTGGTCGCTGGGAAACGTATTCTTTGATCTGTTGAACTGTCTTCCAACCTGCCATGGCAGTTTTGACACTACTCC$ TGTTTGCCCTCCTGATTCCTGCTTTCTTTACCTTTTAACATTGCCCCTTTCAGGGGACCCCACTTTGTAGGGAAT TTATAGAACAGTTACCTTTAGCTGACCCCTTTCCTCACAGGGACCAAGACAAAGCATGGGACATGAAATTAAGAG TGAACTTCTTATGGGAGGCTGCAGCTGGATCAGAGGAAAAATCCAGTGTGACAGAGTGCAAGTCAGAAGACCTGG

MPQAFLLGSIHEPAGALMEPQPCPGSLAESFLEEELRLNAELSQLQFSEPVGIIYNPVEYAWEPHRNYVTRYCQG PKEVLFLGMNPGPFGMAQTGVPFGEVSMVRDWLGIVGPVLTPPQEHPKRPVLGLECPQSEVSGARFWGFFRNLCG QPEVFFHHCFVHNLCPLLFLAPSGRNLTPAELPAKQREQLLGICDAALCRQVQLLGVRLVVGVGRLAEQRARRAL AGLMPEVQVEGLLHPSPRNPQANKGWEAVAKERLNELGLLPLLLK

TGACCCTAACAGTCGATTCAAGGCCAAGTGGTCAGTTTGTCAGCCTTTTTTAAGGGATTTCTTTTTATTTTTAGG AATTCCAAACAGAGTTAACCTAAACTGTCATTGCCAAAAGATCAGTCTTAAACTTTCTTAGCACCTGTACCTGTT TAATGTGATCAGCTATCAGTGAGGAAAAAAAAAAAAATCTATTTAGGTCTTGGAATGGTTCCTGTACCTAGAGTA TGCAGTGGCGTGATCTTGGCTCACTGCAACCTCCGCCTCCCGGGTTCAAGCAGTTCTCTGCCTCAGCCTCCTGAG CAGCTGGGATTATAGGCGCCTGCCACCATGCCCGGCTAATTTTTTGTATTTTTAGTAGAGACAGGGTTCACCATCT TGAGCCAGCACCCGGCCACAGTATCTTTATTACAGCTCACTGCAGCCTCAATCTCCTGGGCTCAAATGATCCTCC TGCCTCAGCCTCCCAAGCAGCTGGGACTACAGGCGCACACCACGGTGTCTGGCTAATTTTATTATTAAAAAAATG TTTTGTAGAGACAGTCTCCCTGTGTTGCCCAGGCTGGTCTCCAACTCGTGAGCTCAAGTGATCCACGTGCCTCAG TAAATCATCTTTTGAGTTTCTGTTGTATGTGGGGACTTCCTACACTGGCTGCTGTGAAGAGGTATGGAAGAAAAGG AGAGGCTTTCTGCCTAGAAATTCTTTGAGAACACCTGAAAAGACAGTTTAATCATGTCACAACACTCTTAAGGCT CAAGTCAGTGTTCTGGTTTCCGGTAGCTTTAGGATTGGATTCTAAACGAGGGCTGGTGAGTTTGGTGTTTTGT AGGAAAGAATTCAAGAGTCTATATGATTAGTTACAGAGAATATTTTCATCCCCTCTCCCTGAATAGAAAAGCAGG GGTCACCATTTGTATCCTTACCCTTGAGGTGTTTTTGAAGATGCTGTAACTCTTGAAGTTGAGCTGAGGCAGAAA ATTCCCACGCCACCAACTTGCAGCTTTATAAGAGCGCTACCAAGAACCACCACTGGGGAAAAGGTTCTTATTCAT TGTTTCTGTTGGAATGTGATCTTGCTTTCTGGATTTTAGGAATTCAGGTTACTCAGTATAAAACTCTGAGAAATC AGTGTGACTTAGTCCTTCACCTCCTAAGATAAAGTGAATATTTCTTTACAAAATAATTCATGTCCTTAATGTTAA ${\tt AGATGTAATTTTATTTTCAAAACATCTATAACATGACTTTCAGAAGCAGTTCATTTTTCCAAGATTCCTCACATT}$ ATACTAGATAAATAATAGGCCCTCAGTTAATACCCTTCAGTTATTGAATTAATCTAGTTTGTGGAATGAGGTGTA TCCTGCCAACTTCCCTCTGCTCCCAAGTACACTCTGAGAGGTAAAATGCTCTGGGAAATGGAACAAGAATCGAGT AATCAAAGTTAATAGAATACTTCAGGGTCCTCTGTGGAGGATGTCTTGAGCCAGAGTTTAAGCCTGACACACAGG $\tt CTTTGGTCCTCACTGAGCTGTCTCCAAGACTGGAACTACTTAGTGACTCGGCAAATTTTCTGCCCCCCACCCCTC$ TGGATTAGGGAATCGTGAGGCAGGGATGCTACTGCGTATTTCTCTCTGCAGGTTGGGGATTAAAGTTCCTTTCCC CATGGGTTTGAAGCAGACTCAGACTGTCTCAGGATCAAAGCAACCCTCAATGGTTTTGATTTATGTCATTGCTTA CCACTCCCAACCAATCCCAGGACAGCTGGGTCACTGTACCCCTTTGTGGTATCTGTACCTGGGCCTCTCCTTCC TCATAGGGACCAGCTGATTGAATAAATGTGACCACCTTATTTCCACCCCCCACCCCCAAAAGCTACATTGGAATT ATTTTTCCTAGAAATGTGTATAACACTCAGAATTGGGCATTGATCCTTAAAGCTTCATCCCATTCACCGTATTCA ACATCTGTCATCTCTTAGTGTCTGCAGTCTGAACCTAACCTTGACCTTTTTTCCCTCTGGTTTGAGAAAACTTTG TCCTCTTCCCAATAGGGCTCTTTCTGCTTTCCCTCTCCTTGGCCCTAGATTTGTAATCCATGAAAAAGCACAAGG TCCTGGCTCCTTGCGGTCACATTCTGGTTCTCTGTGTTTTTGTGGACTCTGCTCTCACCGTTCACCCAGCACTAGC AGTACCAGATGGTTCTGTGGAGTCCTGGGGAATGGAGAGACACAGTCTGACTCCCTGCCAAGTAGCCAGGAGTT GACTTGCCCATGGTCCGCTGGCTTTCCCACCACTTCCTACAGGATGGGATCTAAGAGACTCAAGAGCTGGGTTTC TTTCAGCACTCTGTACTGTCCCAAATAGCAAACAAATCACTTTGTAGCCAGATTTCTGAATGGAAATGAGAAATT GAATTCTCCATGGACTTTTAGGTTTATGGGGGAGTTTTAGCTGTGTTTCTTGGTTTTATTTCAGCCAAACATGTC **AAGCATTTATGTGTTTCCATAACTGACATCTGATGCAGACCTCATTCTCTCCCCCCTCTTCTACCCTCCTCTTTTC** CCCCTTTCATACTCTTGTATTGGTTCTAATAAATGGTTGCTTTTC

MVDLGQVTSFNASVPHLSNGVNNTDLPHRGVVVRHCKSKLIEYFRVLCGGCLEPEFKPDTQALVLTELSPRLELL SDSANFLPPTPHQSC

PCT/US2003/028547

3919/6881 FIGURE 3610

GGAAGAGCCGAGACTGCGAAGGAGAACGCAGCAAGCCCAGGCGGCGGTGGAAAGGCTAAAGGAGGACACCTAA ATCCTGCCCACCACCACCTATTAATCCACCCTTTCCCCCAGGCCCCTGTCCTCCCCCAGGAGCTCCCCATG GCAATCCAGCTTTCCCCCCAGGTGGGCCCCCTCATCCTGTGCCACAGCCAGGGTATCCAGGATGCCAACCGTTGG GTCCCTACCCTCCTCCATACCCACCGCCTGCCCCTGGAATCCCTCCTGTGAATCCCTTGGCTCCTGGCATGGTTG GACCAGCAGTGATAGTAGACAAGAAGATGCAGAAGAAAATGAAGAAAGCTCATAAAAAGATGCACAAGCACCAAA TACAGGCCCTGGACCCTTCCCTCAAGTCTCACCAGTTCTGCTCTCCCATCAAGCTTCAGATGCCATGTTGTACTG GGGGAATGTAGCCCTTGTGCTCCCCACCCCTACCTCCACCTGAGCCTCACCTGCTGTTGAGCCCTGAGTGGCT AGGGGAAATGGGAAGAGATTGCCATGGCCTGGCCATCTTGTTGCTGCTTAGATCATATAGCTAATGAATT ${\tt AGGCAGGGGAGCTATTTTTGAAGATGATGAACTAAATGTTGAAGACAAGTTTGAGATCTGTAAAATGTGATTTT}$ TTACTTCCACTTATAATACTTGTGATTGGGGAGGTTTGTGGAAATTCAATTATGATGAAAAACCTATCTTTTTTG AGGTTGCTGGGAAGTAGAGTCCATTTGGTTGATGAGCTTTGACTGCGGTTTTGGAACCTTACCTCTCCTTAG AAAAAA

 ${\tt MWNPNAGQPGPNPYPPNIGCPGGSNPAHPPPINPPFPPGPCPPPPGAPHGNPAFPPGGPPHPVPQPGYPGCQPLGPYPPPYPPAPGIPPVNPLAPGMVGPAVIVDKKMQKKMKKAHKKMHKHQKHHKYHKHGKHSSSSSSSSSSDSD$

GAGAGGGCGAAGGTAGGCTGGCAGATACGTTCGTCAGCTTGCTCCTTTCTGCCCGTGGACGCCGCCGAAGAAGCA TCGTTAAAGTCTCTCTCACCCTGCCGTC<u>ATC</u>TCTAAGTCAGAGTCTCCTAAAGAGCCCGAACAGCTGAGGAAGC TCTTCATTGGAGGGTTGAGCTTTGAAACAACTGATGAGAGCCTGAGGAGCCATTTTGAGCAATGGGGAACGCTCA CGGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCTAGGGGCTTTGGGTTTGTCACATATGCCACTGTGG CCAGAGAAGATCTCAAAGACCAGGTGCCCACTTAACTGTGAAAAAGATATTTGTTGGTGGCATTAAAGAAGACA GCAGTGGCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGACCATGACTCCGTGGATAAGATTGTCATTCAGA AATACCATACTGTGAATGGCCACAACTGTGAAGTTAGAAAAGCCCTGTCAAAGCAAGAGATGGCTAGTGCTTCAT CCAGCCAAAGAGGTCGAAGTGGTTCTGGAAACTTTGGTGGTGGTCGTGGAGGTGGTTTCGGTGGGAATGACAACT TCGGTCGTGGAGGAAACTTCAGTGGTCGTGGTGGCTTTGGTGGCAGCCGTGGTGGTGGTGGATATGGTGGCAGTG GGGATGGCTATAATGGATTTGGCAATGATGGTGGTTATGGAGGAGCGGCCCTGGTTACTCTGGAGGAAGCAGAG GCTATGGAAGTGGTGGACAGGGTTATGGAAACCAGGGCAGTGGCTATGGCGGGAGTGGCAGCTATGACAGCTATA ACAACGGAGGCGGAGGCGCTTTGGCGGTGGTAGTGGAAGCAATTTTGGAGGTGGTAGAAGCTACAATGATTTTG GGAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAAATTTTGGAGGCAGAAGCTCTGGCCCCT ATGGCGGTGGAGGCCAATACTTTGCAAAACCACGAAACCAAGGTGGCTATGGCGGTTCCAGCAGCAGCAGTAGCT ATGGCAGTGGCAGAAGATTT<u>TAA</u>TTAGGAAACAAGCTTAGCAGGAGAGGAGAGCCAGAGAAGTGACAGGGAAGC TACAGGTTACAACAGATTTGTGAACTCAGCCAAGCACAGTGGTGGCAGGGCCTAGCTGCTACAAAGAAGACATGT TTTAGACAAATACTCATGTGTATGGGCAAAAAACTCGAGGACTGTATTTGTGACTAATTGTATAACAGGTTATTT TAGTCTACTCTTAAGCCATCTTGGTAAATTTCCCCAACAGTGTGAAGTTAGAATTCCTTCAGGGTGATGCCAGGT TCTATTTGGAATTTATATACAACCTGCTTGGGTGGAGAAGCCATTGTCTTCGGAAACCTTGGTGTAGTTGAACTG ATAGTTACTGTTGTGACCTGAAGTTCACCATTAAAAGGGATTACCCAAGCAAAATCATGGAATGGTTATAAAAGT GATTGTTGGCACATCCTATGCAATATATCTAAATTGAATAATGGTACCAGATAAAATTATAGATGGGAATGAAGC TTGTGTATCCATTATCATGTGTAATCAATAAACGATTTAATTCTCTTGAA

3922/6881 FIGURE 3613

MSKSESPKEPEQLRKLFIGGLSFETTDESLRSHFEQWGTLTDCVVMRDPNTKRSRGFGFVTYATVEEVDAAMNAR PHKVDGRVVEPKRAVSREDSQRPGAHLTVKKIFVGGIKEDTEEHHLRDYFEQYGKIEVIEIMTDRGSGKKRGFAF VTFDDHDSVDKIVIQKYHTVNGHNCEVRKALSKQEMASASSSQRGRSGSGNFGGGRGGGFGGNDNFGRGGNFSGR GGFGGSRGGGGYGGSGYNGFGNDGGYGGGGPGYSGGSRGYGSGGQGYGNQGSGYGGSGSYDSYNNGGGGGFGG GSGSNFGGGGSYNDFGNYNNQSSNFGPMKGGNFGGRSSGPYGGGGQYFAKPRNQGGYGGSSSSSSYGSGRRF

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 $\texttt{GCTCTTGGGTTCTGTAGTTTTCTCGCGATCCAAAAGGCTCCGTGCCCAAAGCAA} \underline{\textbf{ATG}} \texttt{CTGGCCGCCAACCCAGGC}$ AAGACCCCGATCAGCCTTCTGCAGGAGTATGGGACCAGAATAGGGAAGACGCCTGTGTACGACCTTCTCAAAGCC GAGGGCCAAGCCCACCAGCCTAATTTCACCTTCCGGGTCACCGTTGGCGACACCAGCTGCACTGGTCAGGGCCCC AGCAAGAAGGCAGCCAAGCACAAGGCAGCTGAGGTGGCCCTCAAACACCTCAAAGGGGGGAGCATGCTGGAGCCG GCCCTGGAGGACAGCAGTTCTTTTCTCCCCTAGACTCTTCACTGCCTGAGGACATTCCGGTTTTTACTGCTGCA GCAGCTGCTACCCCAGTTCCATCTGTAGTCCTAACCAGGAGCCCCCCATGGAACTGCAGCCCCCTGTCTCCCCT ${\tt CAGCAGTCTGAGTGCAACCCCGTTGGTGCTCTGCAGGAGCTGGTGGTGCAGAAAGGCTGGCGGTTGCCGGAGTAC}$ ACAGTGACCCAGGAGTCTGGGCCAGCCCACCGCAAAGAATTCACCATGACCTGTCGAGTGGAGCGTTTCATTGAG ATTGGGAGTGGCACTTCCAAAAATTGGCAAAGCGGAATGCGGCGGCCAAAATGCTGCTTCGAGTGCACACGGTG CCTCTGGATGCCCGGGATGGCAATGAGGTGGAGCCTGATGATGACCACTTCTCCATTGGTGTGGGGCTCCCGCCTG GATGGTCTTCGAAACCGGGGCCCAGGTTGCACCTGGGATTCTCTACGAAATTCAGTAGGAGAGAAGATCCTGTCC GAGCAGGCCTTTCACGTCAGCTACCTGGATATTGAGGAGCTGAGCCTGAGTGGACTCTGCCAGTGCCTGGTGGAA CTGTCCACCCAGCCGGCCACTGTGTGTCATGGCTCTGCAACCACCAGGGAGGCAGCCCGTGGTGAGGCTGCCCGC $\tt CGTGCCCTGCAGTACCTCAAGATCATGGCAGCCAGCAGCAGCTGACCCCAGCTGGACTCATGGATGTGCACCCTTT$ ${\tt GCTCCCTGCTCTTTCTGCCTCTGGGCTCATGTATCTGCGCAGCTCTGGTACCCTCTGTGGGTGCCATCTCTACCT}$ CAGGATCCGTCCTCATTTTATTGGTGATGATGAATGGGAATGAAATCAGGGGGGCTGTCTACTAGAGCCTGGAATA AATATGCTGCTTTGTGGATTTTTAA

MLAANPGKTPISLLQEYGTRIGKTPVYDLLKAEGQAHQPNFTFRVTVGDTSCTGQGPSKKAAKHKAAEVALKHLK GGSMLEPALEDSSSFSPLDSSLPEDIPVFTAAAAATPVPSVVLTRSPPMELQPPVSPQQSECNPVGALQELVVQK GWRLPEYTVTQESGPAHRKEFTMTCRVERFIEIGSGTSKKLAKRNAAAKMLLRVHTVPLDARDGNEVEPDDDHFS IGVGSRLDGLRNRGPGCTWDSLRNSVGEKILSLRSCSLGSLGALGPACCRVLSELSEEQAFHVSYLDIEELSLSG LCQCLVELSTQPATVCHGSATTREAARGEAARRALQYLKIMAGSK

GCCTCTCCAGCTGCGACACAGATGGCGCGCGGGCTCTTGGGTTCTGTAGTTTTCTCGCGATCCAAAAGGCTCCGT GCCCAAGTGAGTCCTTACCGCCTCCCTACCCAGCGGCTTCCCCTCCGCTAGTACGCATGTCCACAGCTTCACGGA GCGGATAGCTCCCCTCCAGATGGAGGCTCACGAAGTAGGGTGGGCGGGGGACTCCATATCCCAGCGTGCCCCGCG GCGGGCCCTACCGGCCGCGACTCCGGGCTTGGCCCCGGCCCTAGCTCGTCGGCTGTATTGGGGCGCGTGGAGG CTGCAGTCACGGTGGCGCCCGCGGGGACGGAGGGGAATGAGTGAAGAGGAGCAAGGCTCCGGCACTACCACGG GCTGCGGGCTGCCTAGTATAGAGCAAATGCTGGCCGCCAACCCAGGCAAGACCCCGATCAGCCTTCTGCAGGAGT ATGGGACCAGAATAGGGAAGACGCCTGTGTACGACCTTCTCAAAGCCGAGGGCCAAGCCCACCAGCCTAATTTCA CCTTCCGGGTCACCGTTGGCGACACCAGCTGCACTGGTCAGGGCCCCAGCAAGAAGGCAGCCAAGCACAAGCACA CTGAGGTGGCCCTCAAACACCTCAAAGGGGGGGAGCATGCTGGAGCCGGCCCTGGAGGACAGCAGTTCTTTTCTC CCCTAGACTCTTCACTGCCTGAGGACATTCCGGTTTTTACTGCTGCAGCAGCTGCTACCCCAGTTCCATCIGTAG TCCTAACCAGGAGCCCCCCATGGAACTGCAGCCCCCTGTCTCCCCTCAGCAGTCTGAGTGCAACCCCGTTGGTG CTCTGCAGGAGCTGGTGCAGAAAGGCTGGCGGTTGCCGGAGTACACAGTGACCCAGGAGTCTGGGCCAGCCC ACCGCAAAGAATTCACCATGACCTGTCGAGTGGAGCGTTTCATTGAGATTGGGAGTGGCACTTCCAAAAAATTGG CAAAGCGGAATGCGGCGCCAAAATGCTGCTTCGAGTGCACACGGTGCCTCTGGATGCCCGGGATGGCAATGAGG TGGAGCCTGATGATGACCACTTCTCCATTGGTGTGGGCTCCCGCCTGGATGGTCTTCGAAACCGGGGCCCAGGTT GCACCTGGGATTCTCTACGAAATTCAGTAGGAGAGAGATCCTGTCCCTCGCAGTTGCTCCCTGGGCTCCCTGG GTGCCCTGGCCCTGCCTGCCGTGTCCTCAGTGAGCTCTCTGAGGAGCAGGCCTTTCACGTCAGCTACCTGG ATATTGAGGAGCTGAGCCTGAGTGGACTCTGCCAGTGCCTGGTGGAACTGTCCACCCAGCCGGCCACTGTGTGTC ATGGCTCTGCAACCACCAGGGAGGCAGCCCGTGGTGAGGCTGCCCGCGCGTGCCCTGCAGTACCTCAAGATCATGG $\tt CAGGCAGCAGG\underline{TGA} AGCCCCAGCTGGACTCATGGATGTGCACCCTTTGCTCCCTGCTCTTTCTGCCTCTGGGCTC$ AGAAGGCACAGGGCAAGGACCACAGAGCCTCAGCCAGGCCCAGGATCCGTCCTCATTTATTGGTGAT ΑΑΑΑΑΑΑΑΑΑΑ

MSEEEQGSGTTTGCGLPSIEQMLAANPGKTPISLLQEYGTRIGKTPVYDLLKAEGQAHQPNFTFRVTVGDTSCTG QGPSKKAAKHKAAEVALKHLKGGSMLEPALEDSSSFSPLDSSLPEDIPVFTAAAAATPVPSVVLTRSPPMELQPP VSPQQSECNPVGALQELVVQKGWRLPEYTVTQESGPAHRKEFTMTCRVERFIEIGSGTSKKLAKRNAAAKMLLRV HTVPLDARDGNEVEPDDDHFSIGVGSRLDGLRNRGPGCTWDSLRNSVGEKILSLRSCSLGSLGALGPACCRVLSE LSEEQAFHVSYLDIEELSLSGLCQCLVELSTQPATVCHGSATTREAARGEAARRALQYLKIMAGSK

GCCTCTCCAGCTGCGACACAGATGGCGCGCGGGCTCTTGGGTTCTGTAGTTTTCTCGCGATCCAAAAGGCTCCGT GCCCAAGTGAGTCCTTACCGCCTCCCTACCCAGCGGCTTCCCCTCCGCTAGTACGCATGTCCACAGCTTCACGGA GCGGATAGCTCCCCTCCAGATGGAGGCTCACGAAGTAGGGTGGGCGGGGGACTCCATATCCCAGCGTGCCCCGCG GCGGGCCCTACCGGCCGCGACTCCGGGCTTGGCCCCGGCCCTAGCTCGTCGTCGTATTGGGGCGCGTGGAGG CTGCAGTCACGGTGGCGCCCGCGGGGACGGAGGGGAATGAGTGAAGAGGAGCAAGGCTCCGGCACTACCACGG GCTGCGGGCTGCCTAGTATAGAGCAAATGCTGGCCGCCAACCCAGGCAAGACCCCGATCAGCCTTCTGCAGGAGT ATGGGACCAGAATAGGGAAGACGCCTGTGTACGACCTTCTCAAAGCCGAGGGCCAAGCCCACCACCACCTAATTTCA CCTTCCGGGTCACCGTTGGCGACACCAGCTGCACTGGTCAGGGCCCCAGCAAGAAGGCAGCCAAGCACAAGGCAG CTGAGGTGGCCCTCAAACACCTCAAAGGGGGGGAGCATGCTGGAGCCGGCCCTGGAGGACAGCAGACTCTTCACTG CC<u>TGA</u>GGACATTCCGGTTTTTACTGCTGCAGCAGCTGCTACCCCAGTTCCATCTGTAGTCCTAACCAGGAGCCCC CCCATGGAACTGCAGCCCCTGTCTCCCCTCAGCAGTCTGAGTGCAACCCCGTTGGTGCTCTGCAGGAGCTGGTG GTGCAGAAAGGCTGGCGGTTGCCGGAGTACACAGTGACCCAGGAGTCTGGGCCAGCCCACCGCAAAGAATTCACC ATGACCTGTCGAGTGGAGCGTTTCATTGAGATTGGGAGTGGCACTTCCAAAAAATTGGCAAAGCGGAATGCGGCG GCCAAAATGCTGCTTCGAGTGCACACGGTGCCTCTGGATGCCCGGGATGGCAATGAGGTGGAGCCTGATGATGAC CACTTCTCCATTGGTGTGGGCTCCCGCCTGGATGGTCTTCGAAACCGGGGCCCAGGTTGCACCTGGGATTCTCTA CGAAATTCAGTAGGAGAAGATCCTGTCCCTCCGCAGTTGCTCCCTGGGCTCCCTGGGTGCCCTGGGCCCTGCC TGCTGCCGTGTCCTCAGTGAGCTCTCTGAGGAGCAGGCCTTTCACGTCAGCTACCTGGATATTGAGGAGCTGAGC CTGAGTGGACTCTGCCAGTGCCTGGTGGAACTGTCCACCCAGCCGGCCACTGTGTGTCATGGCTCTGCAACCACC $\tt CCCAGCTGGACTCATGGATGTGCACCCTTTGCTCCCTGCTCTTTCTGCCTCTGGGCTCATGTATCTGCGCAGCTC$ TGGTACCCTCTGTGGGTGCCATCTCTACCTCTGACACAGACTGCCTTGAAGCTGAAGCTGAAGGCACAGGGCAAG ${\tt GAGCCAAGGACCACAGAGCCTCAGCCAGGCCCAGGATCCGTCCTCATTTATTGGTGATGAATGGGAATGAAA}$

 ${\tt MSEEEQGSGTTTGCGLPSIEQMLAANPGKTPISLLQEYGTRIGKTPVYDLLKAEGQAHQPNFTFRVTVGDTSCTG} \\ {\tt QGPSKKAAKHKAAEVALKHLKGGSMLEPALEDSRLFTA}$

TGGAAAGGAAGTTGGCAGTATCATCGGAAAGAAAGGAGAGTCAGTTAAGAAGATGCGCGAGGAGAGTGGTGCACG TATCAACATCTCAGAAGGGAATTGTCCTGAGAGAATTATCACTTTGGCTGGACCCACTAATGCCATCTTCAAAGC CTTTGCTATGATCATTGACAAACTGGAAGAGGACATAAGCAGCTCTATGACCAATAGCACAGCTGCCAGTAGACC ${\tt CCCGGTCACCCTGAGGCTGGTGGTCCCTGCTAGTCAGTGGGCTCTCTCATTGGAAAAGGTGGATGCAAGATCAA}$ GGAAATACGAGAGAGTACAGGGGCTCAGGTCCAGGTGGCAGGGGATATGCTACCCAACTCAACTGAGCGGGCCAT CACTATTGCTGGCATTCCACAATCCATCATTGAGTGTGTCAAACAGATCTGCGTGGTCATGTTGGAGACTCTCTC ${\tt CCAGTCCCCCGAAGGGCGTGACCATCCCGTACCGGCCCAAGCCGTCCAGCTCTCCGGTCATCTTTGCAGGTGG}$ TCAGGACAGGTACAGCACAGGCAGCGACAGTGCGAGCTTTCCCCACACCCCGTCCATGTGCCTCAACCCTGA GCACCAGTTGGCAATGCAACAGTCTCATTTTCCCATGACGCATGGCAACACCGGATTCAGTGGCATTGAATCCAG $\tt CTCTCCAGAGGTGAAAGGCTATTGGGCAGGTTTGGATGCATCTGCTCAGACTACTTCTCATGAACTCACCATTCC$ AAACGATTTGATTGGCTGCATAATCGGGCGTCAAGGCGCCCAAAATCAATGAGATCCGTCAGATGTCTGGGGCGCA GATCAAAATTGCGAACCCAGTGGAAGGATCTACTGATAGGCAGGTTACCATCACTGGATCTGCTGCCAGCATTAG $\tt CCTGGCTCAATATCTAATCAATGTCAGGCTTTCCTCGGAGACGGGTGGCATGGGGAGCAGC\underline{TAG}AACAATGCAGA$ TTCATCCATAATCCCTTTCTGCTGTTCACCACCACCCATGATCCATCTGTGTAGTTTCTGAACAGTCAGCGATTC TTTAATTCCTTT

MDTGVIEGGLNVTLTIRLLMHGKEVGSIIGKKGESVKKMREESGARINISEGNCPERIITLAGPTNAIFKAFAMI IDKLEEDISSSMTNSTAASRPPVTLRLVVPASQCGSLIGKGGCKIKEIRESTGAQVQVAGDMLPNSTERAITIAG IPQSIIECVKQICVVMLETLSQSPPKGVTIPYRPKPSSSPVIFAGGQDRYSTGSDSASFPHTTPSMCLNPDLEGP PLEAYTIQGQYAIPQPDLTKLHQLAMQQSHFPMTHGNTGFSGIESSSPEVKGYWAGLDASAQTTSHELTIPNDLI GCIIGRQGAKINEIRQMSGAQIKIANPVEGSTDRQVTITGSAASISLAQYLINVRLSSETGGMGSS

CTCGCGCCTGCAGTTTTTGGCTTTCACCCCCAACCAGTGACCAAAGACTTGACCACTCAAAGTCCAGCTCCCCAG AACACTGCTCGACATGGACACCGGTGTGATTGAAGGTGGATTAAATGTCACTCTCACCATCCGGCTACTTATGCA TGGAAAGGAAGTTGGCAGTATCATCGGAAAGAAAGGAGATCAGTTAAGAAGATGCGCGAGGAGAGTGGTGCACG TATCAACATCTCAGAAGGGAATTGTCCTGAGAGAATTATCACTTTGGCTGGACCCACTAATGCCATCTTCAAAGC CTTTGCTATGATCATTGACAAACTGGAAGAGGACATAAGCAGCTCTATGACCAATAGCACAGCTGCCAGTAGACC CCCGGTCACCCTGAGGCTGGTGGTCCCTGCTAGTCAGTGTGGCTCTCTCATTGGAAAAAGGTGGATGCAAGATCAA GGAAATACGAGAGAGTACAGGGGCTCAGGTCCAGGTGGCAGGGGATATGCTACCCAACTCAACTGAGCGGGCCAT CACTATTGCTGGCATTCCACAATCCATCATTGAGTGTGTCAAACAGATCTGCGTGGTCATGTTGGAGTCCCCCCC GAAGGGCGTGACCATCCCGTACCGGCCCAAGCCGTCCAGCTCTCCGGTCATCTTTGCAGGTGGTCAGGACAGGTA CAGCACAGGCAGCGACAGTGCGAGCTTTCCCCACACCACCCCGTCCATGTGCCTCAACCCTGACCTGGAGGGACC ACCTCTAGAGGCCTATACCATTCAAGGACAGTATGCCATTCCACAGCCAGATTTGACCAAGCTGCACCAGTTGGC AATGCAACAGTCTCATTTTCCCATGACGCATGGCAACACCGGATTCAGTGGCATTGAATCCAGCTCTCCAGAGGT GAAAGGCTATTGGGCAGGTTTGGATGCATCTGCTCAGACTACTTCTCATGAACTCACCATTCCAAACGATTTGAT TGGCTGCATAATCGGGCGTCAAGGCGCCAAAATCAATGAGATCCGTCAGATGTCTGGGGCGCAGATCAAAATTGC GAACCCAGTGGAAGGATCTACTGATAGGCAGGTTACCATCACTGGATCTGCCAGCATTAGCCTGGCTCAATA $\tt CCCTTTCTGCTGTTCACCACCACCCATGATCCATCTGTTGTAGTTTCTGAACAGTCAGCGATTCCAGGTTTTAAAT$

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3932/6881 FIGURE 3623

MDTGVIEGGLNVTLTIRLLMHGKEVGSIIGKKGESVKKMREESGARINISEGNCPERIITLAGPTNAIFKAFAMI IDKLEEDISSSMTNSTAASRPPVTLRLVVPASQCGSLIGKGGCKIKEIRESTGAQVQVAGDMLPNSTERAITIAG IPQSIIECVKQICVVMLESPPKGVTIPYRPKPSSSPVIFAGGQDRYSTGSDSASFPHTTPSMCLNPDLEGPPLEA YTIQGQYAIPQPDLTKLHQLAMQQSHFPMTHGNTGFSGIESSSPEVKGYWAGLDASAQTTSHELTIPNDLIGCII GRQGAKINEIRQMSGAQIKIANPVEGSTDRQVTITGSAASISLAQYLINVRLSSETGGMGSS

· AGAGCGACGCGGAACCCCGGGCGCCTGGGTCCCCAGCATGATCCTCGGCAGCCTGAGCCGGGCAGGGCCCCTGCC TCTGCTACGGCAGCCCCGATCATGCAGCCCCCACTGGACCTCAAGCAGATCCTGCCCTTCCCACTCGAGCCAGC CCCTACCCTTGGCCTCTTCAGCAACTACAGCACCATGGACCCTGTGCAGAAGGCTGTGCTCTCCCACACTTTTGG GGGACCCTTGCTCAAGACCAAGCCGCCCGTCATTTCCTGTAATATCTGTCAAATCCGCTTCAATTCTCAGAGCCA GGCTGAGGCGCACTACAAAGGTAATCGCCACGCCCGACGACTCAAAGGCATTGAGGCTGCCAAGACCAGAGGCAG GGAGCCTGGCGTCCGAGAACCTGGAGACCCAGCTCCCCCAGGCAGCACCCCAACAAATGGGGATGGTGTAGCACC CCGTCCAGTTTCCATGGAGAATGGACTGGGGCCAGCCCCAGGATCCCCAGAGAAACAGCCTGGCTCCCCATCCCC TCCCAGCATTCCGGAGACTGGTCAGGGTGTAACCAAGGGTGAAGGGGGGACTCCAGCCCCGGCTTCCTTGCCTGG GGGTAGCAAGGAAGAGGAGAAAGCCAAGCGGCTGCTCTACTGTGCTCTGTGCAAGGTGGCTGTGAACTCCCT GTCCCAGCTTGAGGCACATAACAAAGGTACTAAGCACAAGACAATTCTGGAGGCCCGAAGTGGGCTCGGGCCCAT CAAAGCTTACCCTCGGCTGGGGCCTCCCACCCGGGGGAACCAGAGGCTCCTGCCCAGGACCGAACTTTCCACTG CGTGGCCGGGAAGCCCACCCACTACTGAGCCGTCACAAGAAGTCTAGGGGCGCCGGGGAGCTGGCGGGCACGCT GACTTTCTCCAAGGAGCTGCCCAAGTCCCTGGCGGGCGGCCTGCTCCCCAGCCCCCTGGCGGTGGCTGCAGTGAT GGCAGCGGCAGCAGGCTCGCCGCTGTCCCTGCGCCCGGCTCCAGCCGCACCTCTTCTCCAGGGACCGCCGATCAC TCACCCTCTGCTTCACCCGGCCCCCGGACCCATCCGAACTGCGCACGGACCCATCCTCTTCTCCCCGTACTGACC GTAGCGGGGGGGGGCTTCAGAAGGGGGGGAACACCCCAGATCTCAGGGAACCCCGCCCCTGCCTTTCCCTC TCCCCTAGAAAAGGGGGGCCGTCTCACCCCCGAGCCCCCTTGGAGACACCCCCCCTCCCAAAAGCCATGTCCAT CCAGCCCTTCCCCCAAACCTAGCACAAAACGGGGTTCACAAGCCATGGTCGGGGTCCGGGGGGACAGAAATGG ATTTTCTTGGCAATAAGCGGACTCTGGGACTCCGGCTCCCTACCCCAAACTGAAGCGCTTCCGTGAACACCCCCG TCCTCCGTAGGGGGAGGGGGGGGGTCCTGGGTCCCTCATAAGCACTTTGGTTTTACCGCCTGCAACCTC ACTGTGCCCGCCCCGCACCATGCCCTAGCCCCAGGTCTAGCCGGGCCCATTGCAGGGGGCAGCACTTGGGGGGCAT CTCCGGCACTTGGGTGGGACCAAGGAGATGCCACCATAGACCTTTCCCTCGCCTTCTTCCTCCCTAGTCCGGGTT GCCTCGCCTTCCGCAAAACTGTGAGCAAAAAGCAATAGAAGCCTCGCCCCGCCCTTCCCCTTCGCAGGATTCGC CGAGTCTGTAGCCTCCCGATCCAAGTTCCTAGACCTCATGGCTGTCCCCTCCCACCAGTCACCTCCACTGCACA ACTCGGGCGGGGTGTGACACCTCTCCCCCACCCCGACTCCGTGGTTTCCGTATCGTCAACCCTTCAGCCGCCG ACCCGGGAGGGGTCTGGCCTACACTGGTCTTCCCCTTCCCATCAACTCTTTCTGCTTGACAATGTAGCAACCCAG GCCCCCACCCACGGTCCTCCCCTTTTTCCTCTCCCTGACAATAAAGTCTGAATTTGTTCTGCCCTCC

MQPPLDLKQILPFPLEPAPTLGLFSNYSTMDPVQKAVLSHTFGGPLLKTKRPVISCNICQIRFNSQSQAEAHYKG
NRHARRVKGIEAAKTRGREPGVREPGDPAPPGSTPTNGDGVAPRPVSMENGLGPAPGSPEKQPGSPSPPSIPETG
QGVTKGEGGTPAPASLPGGSKEEEEKAKRLLYCALCKVAVNSLSQLEAHNKGTKHKTILEARSGLGPIKAYPRLG
PPTPGEPEAPAQDRTFHCEICNVKVNSEVQLKQHISSRRHRDGVAGKPNPLLSRHKKSRGAGELAGTLTFSKELP
KSLAGGLLPSPLAVAAVMAAAAGSPLSLRPAPAAPLLQGPPITHPLLHPAPGPIRTAHGPILFSPY

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3935/6881 FIGURE 3626

AGTTCACCCAATGGACCTGCCTACTGCAGCGTAGGCCTCGCCTCAACGGCAGGAGAGCAGGCGGCTGCGGTTGCT GCAGCCTTCAGTCTCCACCCGGACTACGCCATGTTGGGGTTTGTGGGTCGGGTGGCCGCTGCTCCGGCCTCCGGG GCCTTGCGGAGACTCACCCCTTCAGCGTCGCTGCCCCCAGCTCAGCTCTTACTGCGGGCCGCTCCGACGGCGGTC CATCCTGTCAGGGACTATGCGGCGCAAACATCTCCTTCGCCAAAAGCAGGCGCCGCCACCGGGCGCATCGTGGCG GTCATTGGCGCAGTGGTGGACGTCCAGTTTGATGAGGGACTACCACCAATTCTAAATGCCCTGGAAGTGCAAGGC ACAGAAGGCTTGGTTAGAGGCCAGAAAGTACTGGATTCTGGTGCACCAATCAAAATTCCTGTTGGTCCTGAGACT TTGGGCAGAATCATGAATGTCATTGGAGAACCTATTGATGAAAGAGGTCCCATCAAAACCAAACAGTAAATTTGC TCCCATTCATGCTGAGGCTCCAGAGTTCATGGAAATGAGTGTTGAGCAGGAAATTCTGGTGACTGGTATCAAGGT $\tt TGTCGATCTGCTAGCCCCTATGCCAAGGGTGGCAAAATTGGGCTTTTTGGTGGTGCTGGAGTTGGCAAGACTGT$ ACTGATCATGGAGTTAATCAACAATGTCGCCAAAGCCCATGGTGGTTACTCTGTGTTTGCTGGTGTTGGTGAGAG GACCCGTGAAGGCAATGATTTATACCATGAAATGATTGAATCTGGTGTTATCAACTTAAAAGATGCCACCTCTAA GGTAGCGCTGGTATATGGTCAAATGAATGAACCACCTGGTGCTCGTGCCCGGGTAGCTCTGACTGGCTGACTGT TGGTTCAGAGGTGTCTGCATTATTGGGCCGAATCCCTTCTGCTGTGGGCTATCAGCCTACCCTGGCCACTGACAT GGGTACTATGCAGGAAAGAATTACCACTACCAAGAAGGGATCTATCACCTCTGTACAGG

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3936/6881 FIGURE 3627

 $\verb|MYCYLLITSFASPRLVQRCLHYWAESLLLWAISLPWPLTWVLCRKELPLPRRDLSPLYRLSMCLLMT|\\$

 ${\tt MPGEATETVPATEQELPQPQAETGSGTESDSDESVPELEEQDSTQATTQQAQLAAAAEIDEEPVSKAKQSRSEKK} \\ {\tt ARKAMSKLGLRQVTGVTRVTIRKSKNILFVITKPDVYKSPASDTYIVFGEAKIEDLSQQAQLAAAEKFKVQGEAV} \\ {\tt SNIQENTQTPTVQEESEEEEVDETGVEVKDIELVMSQANVSRAKAVRALKNNSNDIVNAIMELTM} \\ {\tt MPGEATETVPATEQEIPQPQAETGSUSTAKAVRALKNNSNDIVNAIMELTM} \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVNAIMELTM} \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVAIMELTM} \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVAIMELTM} \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVAIMELTM} \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVAIMELTM \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVAIMELTM \\ {\tt MPGEATGSUSTAKAVRALKNNSNDIVAIMELTM \\ {\tt MPGE$

 $\label{thm:mkgwgwlallgallgtawarrsqdlhcgacralvdeleweiaqvdpkktiqmgsfrinpdgsqsvvevpyarse \\ ahltelleeicdrmkeygeqidpsthrknyvrvvgrngesseldlqgiridsdisgtlkfacesiveeyedelie \\ ffsreadnvkdklcskrtdlcdhalhishdel \\$

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3942/6881 FIGURE 3633

TGGGGGCAGCCCAGATCCTACAGAGCGACCTTCTGCCCATCCTCACCCAGCACCACCAGGACAAGCCTCTCTTTG ATGCTGTTATCCAGACTGATGGTGAACTTGACACAACCAGCCTTGCTCTGTTTTTGGCAATCTGCCTAAGGAGCCC AGCTTTCGGCACCATTTTTTGCAGGTGCTAACTTATTTGCAGGCCTACAAAGAGGCCTTTGCCAGTGAGAAGGCCT TTTGGAGTCCTCAGTGAAACCTTGTATGAGCTGCTGCAGCTGGGCTGGGAGGAACGGCAGGAGGAAGACACTTG CTGATTGAACGGATCCTACTGCTGGTCAGAAATATTCTCCATGTCCCAGCTGACCTTGATCAGGAGAAGAAGATT GATGATGACGCCAGTGCCCATGACCAGCTCCTCTGGGCGATTCACCTCAGCGGCCTGGATGACCTGCTCCTTT AACCCCGAGCAGCTGGCGGGAGTAGGGCAGGGACGCTTAGCTCAGGAGCGGAGTGCAGATTTTTGCAGAACTGGAG GTATTGCGCCAGCGAGAGATGGCAGAAAAGAAGACTCGAGCCCTCCAGCGAGGCAACAGGCATTCTCGATTTGGG GGCTCCTATATTGTCCAGGGGTTGAAATCCATTGGGGAGAGGGACCTCATCTTTCACAAAGGCCTTCACAACCTA CGAAACTACAGTTCAGATTTGGGAAAGCAGCCGAAAAAGGTGCCTAAACGTCGCCAGGCCGCCCGAGAGCTGTCC ATTCAGCGCCGTTCTGCCCTCAATGTGAGGCTCTTCCTCAGAGACTTCTGCTCTGAGTTCCTGGAGAACTGTTAC AACCGGCTCATGGGATCAGTAAAGGATCACCTGCTTCGGGAGAAAGCTCAGCAGCATGATGAGACCTATTATATG TGGGCCTTGGCTTTCTTCATGGCCTTCAACCGAGCTGCCTCCTTCCGGCCAGGCCTGGTTTCTGAGACCCTCAGT GCCTCCTGGGCACGCCGGATGCACTTGGCTCTGAAGGCCTATCAGGAGCTGCTGGCAACAGTGAATGAGATGGAC TTATCTCCAGATGAGGCTGTGAGGGAGAGCAGCCGCATCATCAAGAACAATATTTTCTATGTGATGGAGTACCGA GAACTATTCCTGGCACTTTTTCGAAAGTTTGATGAGAGATGCCAGCCCCGCTCTTTCCTTCGTGACCTGGTGGAG ACCACCCACCTCTTCCTCAAAATGTTGGAGCGATTCTGTCGGAGCCGTGGGAACCTGGTGGTGCAG

TGTGAGACAACTTCAACAAGAAGTGGCTGACAGCGTAAAAAAATTAACGACGTTAGAGTCTCCACTGGAAGGTAT ATCATGTTGTCACATTAATTTGGATGAGACACAGGCCTCAAATAAGAAATTATTTCAAGTGAAAAGTCAAATATA ${\tt AGAAACTCCTGGAA} \underline{\textbf{ATC}} {\tt ACAATAAATATGTTAAATGTATTTGGAAATGAAGACTTTGATTGCCATGGAGACTTAA}$ AAACAGATCAACTGAAAATGGATATTCTGATTAAGAAGCTAAAACAGAAGTTTGATGATCTTACAGCACAGAAGG AAGCTTTATCTTCAAAATGTGTCAATTTGGCTAAAGACAATCAAGTTCTTCAACAGGAGTTTTTATCTATGAAAA AAGTACAACAGCAATGTGAAAAACTTGAGGAGGATAAAAAGATGTTGAAAGAAGAATATTAAATCTTAAGACAC ATATGGAAAACAATAGGGTAGAAATTAGTAAACTACAAGAATATAAATTGGAGCTAGATGAAAAAGGCAATGCAGG CAGTAGAAAAATTAGAAGAAATCCATTTACAGGAACAAGCACAATATGAAAAACAATTAGAGCAGTTAAACAAGG ATAATATGGCTTCACTAAATAAAAAGGAACTCACACTTAAAGATGTGGAATGTAAATTCTCAGAAATGAAAACTG CTTATGAAGAGGTTACAACCGAATTAGAAGAATATAAGGAAGCCTTTGCAGCAGCATTGAAAGCTAACAATTCCA TGTCAAAAAAGTTAACAAAATCAAATAAGAAAATAGCAGTGATTAGCATGAAGCTCCTCATGGAGAAAGAGCAGA TGAAATATTTTCTCAGTGCTCTTCCTACAAGGCGAGACCCAGAGTCACCTTGTGTTGAAAATCTTACTAGTATAG GACTCAACAGAAAATATATTCCCCAAACACCCATAAGAATTCCTATTTCAAGCCCACAGACTTCAAATAACTGCA AGAACTCC**TAG**ACTGTGATGGAGCTGGACTGTGTAGAACAAATAACTAGAGAAACAAAGAGAATTGTTGCTGTGT TGAACACTTGCTCCCGTCTACTTACTTCTCTATAATCCACTGCCATGGAATGAGTGATTTTTCTTAGAAGCAGAG GTGGAGCCACTGAGGAAGCACAGGCGAGCCCTCCCCAGCACGTGCTCACTGGTCCCCAACAGAACAACCGCTGCC GCATCCATGAGGCTCCCATTGTGGTGGGTTGTCACCCCACAATGTCACTGTTGCTGAGCCCCCATCGCCTCTG TGTTGTGGAGCAGTTAGAGACACACTGTGGTGTCTGAGTGGCTCTGTGTGAAGGACCGTTTTCTAGGTGAGAGGC ACATCTCAACACGCTGACTGATCAGACTCAACCATTTTGCACACCCTGGTCAGAATGAAACATTCCTTGGGAAC TCGGGCCGTGAGAAGCATCCTTCCTGATCACCTGACTGTAGAAACATCCTTATCGCACCCTCCCGGGCAAAGGCC CAACAGCCTGACTGCAGGAACATCCTTGCCATATCCTGCCGGGCAGCAAGCTCTACCGCCCACGCCCCTCCTTCC CAGTCCCATGATCACCCCAGCCTGTGAGAGGCAGTTGGTGCTGGCAGTAAGCTGGTTTCCTCCTCTGCAGGGTTT TGGATTCTGGGGCCCGAGGTCGAGCCCGCCGCTGCCGCCTGAGGGAAGCGAGAAGAGGCCGCGACCGGA GTTCGCCCGTCCCCCGTTCACAATGCAGCCTGCTTCTGCAAAGTGGTACGATCGAAGGGACTATGTCTT CATTGAATTTTGTATGAAGACAGTAAGGATGTTAATGTAAATTTTGAAAAATCCAAACTTACATTCAGTTGTCT CGGAGGAAGTGATAATTTTAAGCATTTAAATGAAATTGATCTTTTTCACTGTATTGATCCAAATGATTCCAAGCA TAAAAGAACGGACAGATCAATTTTATGTTGTTTACGAAAAGGAGAATCTGGCCAGTCATGGCCAAGGTTAACAAA AGAAAGGGCAAAGCTTAATTGGCTTAGTGTCGACTTCAATAATTGGAAAGACTGGGAAGATGATTCAGATGAAGA CATGTCTAATTTTGATCGTTTCTCTGAGATGATGAACAACATGGGTGGTGATGAGGATGTAGATTTACCAGAAGT AGATGGAGCAGATGATTCACAAGACAGTGATGATGAAAAAATGCCAGATCTGGAGTAAGGAATATTGTCATC ACCTGGATTTTGAGAAAGAAAATAACTTCTCTGCAAGATTTCATAATTGAGAGAATTCCTGAGTTGATAGCTCT GTTGATATGTACCATTGTATGGGGCAATTTTAAGTCAGCTAAGGCAATAACCTTATGCATGAGCATTTCCCAGAC TTTTCTTCATAACATAGATACTGACATGATAGGAAGCTCTCAGCTTAGGGAAAGAGAATAAATTTTAGATTATAG AACATGGATTCAAAAGTGACTGGAACAAATTGGCTGACACCTTACTGGTAACCTGCTATTCTTCTGGTGTTATCC GTGTTCCAGGTGTATCTTAGCTAAAACTAGAGAATGCCCTAACTTAGATGGTTTTTGAAGCCTATACAATTGGTA TTGTTTGACCCTTAAGCTTTTACATCTCTTAGCATGGAGGACGAAGAAGCTGTACATTGTTGCTTGAGAGTCTG TACATTTAGTCCAGATTTGTATTTGCACTGTCAGTATGGCAAATGAGTGAAAAATGTTTAATACACTATTGGATT TTTTATTTCCTTTTTTGATTCAGCTTATACCCGGGCTGAAAACCTCAATTTATGTTCATGACAGTGGGGATTTT TTTAAATGTCTACATTCTTTCTAATAAACTGTTGGAAGACTT

MTINMLNVFGNEDFDCHGDLKTDQLKMDILIKKLKQKFDDLTAQKEALSSKCVNLAKDNQVLQQEFLSMKKVQQQ CEKLEEDKKMLKEEILNLKTHMENNRVEISKLQEYKLELDEKAMQAVEKLEEIHLQEQAQYEKQLEQLNKDNMAS LNKKELTLKDVECKFSEMKTAYEEVTTELEEYKEAFAAALKANNSMSKKLTKSNKKIAVISMKLLMEKEQMKYFL SALPTRRDPESPCVENLTSIGLNRKYIPQTPIRIPISSPQTSNNCKNS

GACGACCTGTCTCGCTGCGCGCCCCGCCGCCGCGCAGAAATGCTTCGGTTACCCACAGTCTTTCGCCA GATGAGACTGGTGTCCAGGGTGCTGGCTCCTCATCTCACTGGGGCTTATGCCAAAGATGTAAAATTCGGTGCAGA TGCCCGAGCCTTAATGCTTCAAGGTATAGACCTTTTAGCCGATGCTGTAGCCCTTACAATGGGGCCAAAGGGAAG AAGAACAGTGATTATCGAGCAGAGCTGGGGAAGTCCCAAAGTAACAAAAGATGGTGTGACTGTTGCAAAGTCAAT TGACTTAAAGGATAAATATAAAAACATTGGAGCTAAACTTGTTCAAGATGTTGCCAATAACACAAATGAAGAGAC TGCTAATCCAGTGGAAATCAGGAGAGGTGTGATGTTAGTTGTTGATGCTGTAATTGCTGAACTTAAAAAAGCAGTC TAAACCTGTGACCACCCCTGAAGAAATTGCACAGGTTGCTACAATTTCTGCAAACGGAGACAAAGAAATTGGCAA TATCTCTGATGCAATGAAAAAGGTTGGAAGAAAGGGTGTCATCACAGTAAAGGATGGAAAAACACTGAATGATGA ATTAGAAATTATTGAAGGCATAAAGTTTGATCGAGGCTATATTTCTCCATACTTTATTAATACATCAAAAGGTCA GAAATGTGAATTCCAGGATGCCTATGTTCTGTTGAGCGAAAAGAAATTTCTAGTGTCCAGTCCGTTGTACCTGC TCTTGAAATTGCCAATGCTCACCGTAAGCCTTTGGTCATAATCGCTGAAGACGTTGATGGAGAAGCTCTAAGTAC ACTCGTCTTGAATAGGCTAAAGGTTGGTCTTCAGGATGTGGCAATCAAGGCTCCAGGGTTTGGTGACAATAGAAA GAACCAGCTTAAAGATATGGCAATTGCTACTGGTGGTGCAGTGTTTGGAGAAGAGGGGCTGACCCTAAATCTTGA AGATGTTCAGCCTCATGACTTAGGAAACGTTGGAGAGGTCATTGTGACCAAAGATGATGCCACGCTCTTAAAAGA AAAAGGTGACAAGGCTCAAATTGAAAAACGTATTCAAGAAATCATTGAGCAGTTAGATGTCACAACTAGTGAATA TGAAAAGGAAAAACTGAATGAACGGCTGGCAAAACTTTCAGATGTAGTAGCTGTGCTGAAGGTTGGTGGGACAAG TGATGTTGAAGTGAATGAAAGAAGACAGAGTTCGGATGCCCTTAATGCTACAAGAGCTGCTGTTGAAGAAGGC TTTGTATTGGGAGGGGGTTGTGCCCTGCTTCGATGCATTCTAGCCTTGGACTCATTGACTCCAGCTAATGAAGAT CAAAAAATTGGTACAGAAATTATTAAAGAACACTCAAAATTCCAGCAATGACCATTGCTAAGAATGCAGGTGTTG AAGGATCTTCGATAGTTGAGAAAATTACGCAAATTTCCTCAGAAGCTGGTTATGATGCTATGGTTGGAGATTTTG TGAATATGGTGGAAAAATGAATTATTGACCCAACAAAGGTTGTGAGAACTGCTTTATTGGATGCCGCTGGTGTGA CCTCTCTGTTAACTACAGCAGAAGTTGTAGTCACAGAAATTCCTAAAGAAGAGAGACCCTGGAATGGGTGCAA TGGGTAGAATGGGAGGTGGTATGGGAAGTGGCATGTTCTAACTCCTAGACTAGTGCTTTACCTTTATTAATGAAC TGTGACAGGAAGCCCAAGGCAGTGTTCCTCACCAATAACTTCAGAGAAGTCAGTTGGAGAAAAATGAAGAAAAAG GCTGGCTGAAAATCACTATAACCATCAGTTACTGGTTTCAGTTGACAAAATATATAATGGTTTACTGCTGTCATT GTCCATGCCTATAGATAATTTATTTTGTATTTTTGAATAAAAAACATTTGTACATTCCTGATACTGGGTAAAAGA GCCATGTACCAATGTATGGCTTTCAACTTAAATCACTGAGGCATTTTTACTACTATTCTGTTAAAATCAGGATTT TTAGTGCTTGCCACCACAGATGAGAAGTTAAGCAGCCTTTCTGTGGAGAGTGAGAATAATTGTGTACAAAGTAG AGAAATATCCAATTATGTGACAACTTTTGTGTAATAAAAATTTGTTTAAAGTT

MLRLPTVFRQMRLVSRVLAPHLTGAYAKDVKFGADARALMLQGIDLLADAVALTMGPKGRRTVIIEQSWGSPKVT KDGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEETGDGPTTATVLARSIAKEGIEKISKGANPVEIRRGVMLVVD AVIAELKKQSKPVTTPEEIAQVATISANGDKEIGNISDAMKKVGRKGVITVKDGKTLNDELEIIEGIKFDRGYIS PYFINTSKGQKCEFQDAYVLLSEKKISSVQSVVPALEIANAHRKPLVIIAEDVDGEALSTLVLNRLKVGLQDVAI KAPGFGDNRKNQLKDMAIATGGAVFGEEGLTLNLEDVQPHDLGNVGEVIVTKDDATLLKEKGDKAQIEKRIQEII EQLDVTTSEYEKEKLNERLAKLSDVVAVLKVGGTSDVEVNEKKDRVRMPLMLQELLLKKALYWEGVVPCFDAF

GTGCGGTGGTCAGGAACGAGGAGACTCCACTAAGTTCCTTGTGTTGCCTTCATTTTCATTCCCCCAACCCCCAAT GAATTTTAGCCAAATGGAGCGGAGTCCCTGAAAGATTTTTGCCAGGAAGATCTGGAAGAAGAGAAAACCTGCCT GAGGAAGACAGCGAAGAGAAGAAGAAGGGGGCTCAGAAGCAGAACAAGTCCAGGGTAGCTTAGTCCTTTCAAAT GAAAACCTTGGTCAAAGCCTGCATCAGGAAGGCTTTTCTATCCCGCTCCTATGGCTCCAGAACTGCCTGATCCGA GCAGCTGATGATCGGGAAGAGGATGGCTGCTCCCAGGCCGTTCCATTGGTGCCACTCACAGAGGAAAATGAGGAA GCCATGGAAAACGAACAGTTTCAGCAGCTGTTGCGCAAGCTAGGGGTTCGGCCCCCTGCCTCTGGGCAGGAAACC TTCTGGCGAATTCCAGCCAAGCTGAGTCCTACCCAGCTCCGGAGGGCAGCAGCTTCTTTGAGTCAACCAGAGGAG GAACAGAAGCTGCAGCCAGAGCTGCAGCCTAAAGTCCCTGGAGAGCAAGGCTCTGATGAGGAGCACTGTAAAGAG CACCGAGCACAAGCCCTGAGGGCCCTCTTGCTAGCCCACAAGAAGAAAGCGGGCCTGGCATCCCCAGAGGAGAA GACGCTGTTGGTAAAGAGCCGCTGAAGGCAGCACCCAAGAAACGACAATTGCTGGACAGCGACGAGGAACAGGAA GAAGATGAGGGCAGGAACAGAGCACCAGAGTTGGGAGCTCCAGGAATCCAAAAGAAGAAACGATACCAGATTGAG GATGATGAGGATGACTGAAGAGCCTAAGAAGCCTAGGGGTAGAGATAGACACGTTTTTAGATGGTGCATTCAAGTC AGAGTTGGAAGGGTCATACAGGACCCAGAAGCTCCTCTTACTGGACAGAGCAGTAGAATCCCAGGCTCTTTCACG GATTTAGGCTGAGAAACTTCAGCAGCAGTATTGGACTTCTCTGCTGTCAGTCTTTGTTTCTCCCAGTTTTTATCG GTATGCCCCAGCAGCTCTCTGGAGATTTAGTTCTCTTCTTCTAGGAACCATTTCTTTTGGTTATTGGAGCTCCTT AGCAAATAAGAGGAGTGAAATAGAGAAAGCACCCCGGACCCCTTTTATTGGTCTGTTCCTTTGGCTTTCTC TTGGAGGTGGGTCGCAGCACCAGATGGGGAGCTTTATGACATGACAGGCGGGAGTTTTGTACCACTTTTAGAAGA TACCAGATGCCTCTGTCCTCATTTTGTTTCCTATGATCATCCTCTAGATACCAGATAGAGGCCCATTCCTGCATT TGAGATAGGGTTGGAATATAGTACTCTAGATGATGAATGTGTTTGCTTTTGTGTTTTGGTATTAAACATGTAAGATT AGAAGTTCTCATCTCAGTCTGACTTGGCGATATGTCTAAGTTCCCCAGCCCTTCCCCTGCTGTGCTCTTGAAAGA AGAACTTAACAATTTTAGGGTAAAAAGAGACCAACAGACCGGCACAGTGGCTCAAACCTGTTGTCCTAGCACTTT GGGAGGCTGAGGCGGGCGGATCACCTGAGGTCAGGAGTTTGAGACCGGCCTGGACAATATGGCGAAATCCCATCT CCACTAAAAATACAAAAATTAGCCGGCCATGGTGGCATGCGCCTGTAATCCCAGCCACTCGGGTGGCTGAGGCAG GAGAATTGCCTGAACCCAGGAGGCAGAGGTTGCAGTGAGCTAAGGTCACGCCAGTGCATATGCCTGGGCGACAGA AAGACACAGAAAAGCATTTTTGCCTCTAGATCCTTTTGTCTAGGGTAAATTCTTAGGGTGACAAGAGTATGCGGC AGGAAGAAGGAGGAGCCATAAAGGAAGAGAAGCCAGCTTGTTGGCATGGGGCATAGAAAAGGACAAAATCTAGGC ATGAAAAGGATGGATAAATACTGCAAATATTATGTTCTTACCCATTCTTGGAAACGTCAGCTTTCTTGCTTCCTG TGCTTCCAGCCGAGGTAGGGCAAAGGTGAGATTGAGAAAATAGCCATTCAGCTCAGGAAGGCTTCTAAGTAAAGG ATGGATTTGGA

AAAGCTTGTTTGGACGACCTTCGTCTGGGATGCACTCTTCTTCTCCTTCACCTACAAATGATAGAGGATTACGAA GAACTATACGGTTGGCTCCTCTTTCCTTTGGCCTTAGGTTTCTGACCTCCTGCAGCCTCCTCTTGCCTCGGGCTG CCCAGATCTTGGCGGCTGAGGCTGGCTTACCTTCGAGCCGTTCCTTCATGGGATTTGCTGCTCCCTTCACCAACA AGCGAAAGGCTTACTCGGAGCGTAGAATCATGGGGTACTCAATGCAGGAGATGTATGAGGTGGTGTCCAACGTCC AGGAGTATCGTGAGTTTGTGCCCTGGTGTAAGAAGTCTCTGGTGGTATCCAGCCGTAAGGGTCATTTGAAAGCCC AGCTGGAGGTTGGCTTTCCACCTGTCATGGAACGTTACACCTCTGCAGTTTCCATGGTCAAACCTCACATGGTCA AGGCTGTTTGTACTGATGGCAAGCTCTTCAACCACTTAGAGACTATTTGGCGATTCAGCCCTGGTATTCCTGCCT ATCCTCGAACCTGCACTGTGGACTTTTCGATTTCCTTTGAATTTCGTTCTCTGCTGCACTCCCAGCTGGCCACCA TGTTTTTTGATGAGGTTGTCAAACAGAATGTTGCTGCCTTTGAGCGTCGGGCAGCCACCAAGTTTGGTCCAGAAA CAGCCATCCCCGTGAACTGATGTTCCATGAGGTGCACCAGACTTGAGGCAAGGGATTGCTCCCTGACCTCCCTT CTACCCCACTTCCCTACACAATTCTCTTATTTATTTGGTTTGGCTCCTGTTCCAATTTGAAAGGAGTCTGTGTTC CAAAGGATGTGGAAATGAGATGTGCTTAGGAAAGGGTCAGGCCCATCGTAGGAGCACCATATGCCTGCAGCCTTT TCACTACGAATTAGAATAAGGACTATGTGGTTGTCTCTGGACCTTATCAAGACACCTTAGTGTCTGACCAGGGGA TTACCCTGCCTGAGATTCCTCAGGAGAAAAGGCAACCTGCCTCCAGCCTGAAATACATAAAGCCTCATTTTAAGA CTGTAAGTCCATGCTGCCTGGCTACTAGAGAGCAAGGGGGCTTTCTTACCACCAGTGCTGAGGAGAAAAGTACTGA ACGGAAACGGAGTTGTCTTTGTACTCTTGAGTTGTACCTTATTCTTCCACTTGGCCTGAGTTTTTATAAAATTTC AATAAATTGTGACAGTGTG

 ${\tt CAAAGGATCCAAGCATTGAGCCTTCATCCTCTATTCCCCATCCAGTGGGGTGCCGAGGCTCAGGCAGC} \underline{{\tt ATG}}{\tt ACGA}$ CGGAGACCTTTGTGAAGGATATCAAGCCTGGGCTCAAGAATCTGAACCTTATCTTCATTGTGCTGGAGACAGGCC GAGTGACCAAGACAAAGGACGGGCATGAGGTTCGGACCTGCAAAGTGGCGGACAAAACAGGCAGCATCAATATCT CTGTCTGGGACGATGTTGGCAATCTGATCCAGCCTGGGGACATTATCCGGCTCACCAAAGGGTACGCTTCAGTTT TCAAAGGTTGTCTGACACTATATACTGGCCGTGGGGGTGATCTGCAGAAGATTGGAGAATTCTGTATGGTTTATT CTGAGGTTCCTAACTTCAGTGAGCCAAACCCAGAGTACAGCACCCAGCAGGCACCCAACAAGGCGGTGCAGAACG ACAGCAACCCTTCAGCTTCCCAGCCTACCACTGGACCCTCTGCTGCCTCTCCAGCCTCTGAGAACCAGAATGGGA GAATCACTCGAAGCCAGCCCAACCACACCTGCAGGCCCGCCTGGCCCTTCCAGCAACCCTGTTAGTAACGGCA TGGAGAGCAAGATAGCCTTCCACTGATTGGCTGGTGTAGCAGTATTTTAGCCACTGAACTTCAGTGGAGGGTGGT GAGCAGTGTCCTTATCCACCCTAATCTCATACTCCCTCATTGTCCAGCTGAACTACCTGTCCCCTGGGAGTCAGG AGCACTTTGGGAAGCCGAGGTGGGCGGATCACCTGAGGTCGGGAGTTCAAGACCAGCCTGACCAACATGGAGAAA $\tt CCCCGTGTCTACTAAAAATACAGAATTAGCCAGGCATGGTGGCGTATGCCTGTAATCCCAGCTACTTAGGAGGCT$ GAGGCAGGAGATCTCTTGAAACCGGGAGGCGGAGGTTGAGGTGAGCCGAAATTGCACCATTGCACTCCAGCCTG

MTTETFVKDIKPGLKNLNLIFIVLETGRVTKTKDGHEVRTCKVADKTGSINISVWDDVGNLIQPGDIIRLTKGYA SVFKGCLTLYTGRGGDLQKIGEFCMVYSEVPNFSEPNPEYSTQQAPNKAVQNDSNPSASQPTTGPSAASPASENQ NGNGLSAPPGPGGGPHPPHTPSHPPSTRITRSQPNHTPAGPPGPSSNPVSNGKETRRSSKR

3954/6881 FIGURE 3645A

GGCGGGCGGCGGGGCCCGAGCCGGAGAAGATGGCGGTGCGGAAGAAGGACGGCGGCCCCAACGTGAAGTACT ACGAGGCCGCGGACACCGTGACCCAGTTCGACAACGTGCGGCTGTGGCTCGGCAAGAACTACAAGAAGTATATAC AAGCTGAACCACCAACAAGTCCCTGTCTAGCCTGGTTGTACAGTTGCTACAATTTCAGGAAGAAGTTTTTG GCAAACATGTCAGCAATGCACCGCTCACTAAACTGCCGATCAAATGTTTCCTAGATTTCAAAGCGGGAGGCTCCT TGTGCCACATTCTTGCAGCTGCCTACAAATTCAAGAGTGACCAGGGATGGCGGCGTTACGATTTCCAGAATCCAT CACGCATGGACCGCAATGTGGAAATGTTTATGACCATTGAGAAGTCCTTGGTGCAGAATAATTGCCTGTCTCGAC CTAACATTTTCTGTGCCCAGAAATTGAGCCCAAACTACTAGGGAAATTAAAGGACATTATCAAGAGACACCAGG GAACAGTCACTGAGGATAAGAACAATGCCTCCCATGTTGTGTATCCTGTCCCGGGGAATCTAGAAGAAGAGGAAT GGGTACGACCAGTCATGAAGAGGGATAAGCAGGTTCTTCTGCACTGGGGCTACTATCCTGACAGTTACGACACGT GGATCCCAGCGAGTGAAATTGAGGCATCTGTGGAAGATGCTCCAACTCCTGAGAAACCTAGGAAGGTTCATGCAA CTGTCTCCCGCCGAAAGAAGATTTCAGCCAAGACACTGACAGATGAGGTGAACAGCCCAGATTCAGATCGACGGG ACAAGAAGGGGGGAAACTATAAGAAGAGGAAGCGCTCCCCCTCTCCTTCACCAACCCCAGAAGCAAAGAAGAAAA CAAAGGACATGGACGAGCCCTCACCAGTCCCCAATGTAGAAGAGGTGACACTTCCCAAAACAGTCAACACAAAGA CGACGGGCAAGGATGAGGACAGTACGGGGAACAAGGGAGAGCAGACCAAGAATCCAGACCTGCATGAGG ACAATGTGACTGAACAGACCCACCACCATCATCCCCAGCTACGCTGCCTGGTTTGACTACAATAGTGTTCATG CCATTGAGCGGAGGGCTCTCCCCGAGTTCTTCAACGGCAAGAACAAGTCCAAGACTCCAGAGATCTACCTGGCCT ATCGAAACTTTATGATTGACACTTACCGACTGAACCCCCAAGAGTATCTTACCTCTACCGCCTGCCGCCGAAACC TAGCGGGTGATGTCTGTGCCATCATGAGGGTCCATGCCTTCCTAGAACAGTGGGGTCTTATTAACTACCAGGTGG ATGCTGAGAGTCGACCAACCCCAATGGGGCCTCCGCCTACCTCTCACTTCCATGTCTTGGCTGACACACCATCAG GGCTGGTGCCTCTGCAGCCCAAGACACCTCAGGGCCGCCAGGTTGATGCTGATACCAAGGCTGGGCGAAAGGGCA AAGAGCTGGATGACCTGGTGCCAGAGACGGCTAAGGGCAAGCCAGAGCTGCAGACCTCTGCTTCCCAACAAATGC TCAACTTTCCTGACAAAGGCAAAGAGAAACCAACAGACATGCAAAACTTTGGGCTGCGCACAGACATGTACACAA AAAAGAATGTTCCCTCCAAGAGCAAGGCTGCAGCCAGTGCCACTCGTGAGTGGACAGAACAGGAAACCCTGCTTC TCCTGGAGGCACTGGAAATGTACAAAGATGACTGGAACAAAGTGTCCGAGCATGTGGGAAGCCGCACACAGGACG AGTGCATCTTGCATTTCTTCGTCTTCCCATTGAAGACCCATACCTGGAGGACTCAGAGGCCTCCCTAGGCCCCC TGGCCTACCAACCCATCCCCTTCAGTCAGTCGGGCAACCCTGTTATGAGCACTGTTGCCTTCCTGGCCTCTGTCG CGGCCTTGGTGGAGGCCCATGTTCGAAAAGTGGAAGAAGCAGCCAAAGTAACAGGCAAGGCGGACCCTGCCTTCG GTCTGGAAAGCAGTGGCATTGCAGGAACCACCTCTGATGAGCCTGAGCGGATTGAGGAGAGCGGGAATGACGAGG AGGAAGCAAAAGAGAAAACCAGCGAGGCTCCCAAGAAGGATGAGGAGAAAGGGGAAAGAAGGCGACAGTGAGAAGG TGCTGAAGGAAGTGGTGGAGTCTGAGGGGGAAAGGAAGACAAAGGTGGAGCGGACATTGGCGAGGGCAACCTCT TCAAATCTTTGGTGGCCCTGCTGGTGGAGACCCAGATGAAAAAGTTGGAGATCAAACTTCGGCACTTTGAGGAGC TCCACATGGAGCAGCTGAAGTATGCGGAGATGAGGGCTCGGCAGCACCACCAACAGATGCACCAACAGCAGC ATGGCTTGGCTGTGGCTCCAGCCTCTGTAGTCCCTGCTGCTGGCAGTGGGGCCCCTCCAGGAAGTTTGGGCC CAATGATGCCAGGGCAGTGCCAGGCAGCGGCACCCAGGCGTGGCGACCCAGGCACCCCCTGCCTCCAGACC TCACCCCTGTGGACATCACGGTTCCAGGAACAGCCCTTCCCCCACCACTGGGACCCTCCCCAGCCTGGAGAGTT

3955/6881 FIGURE 3645B

 ${\tt AGCTCTGGGGATAGAACAGGGCGCAGATTCCATCTCTCCCCAAGCCCCTTTTTAGTGACTAAGTCAAGGCCCCAA}$ $\tt CTCCCCTCCCCACCCTACGCTGAGCTTATTCGAGTTCATTCGTACTAATAATCCCTCCTGCGGCTTCCTCATTG$ $\tt TTGCTGTTTTAGGCCACCCCAGCTCAGCCAATGATTCCTTTCCCTCTGAATGTCAGTTTTTTAAAAGTCAC$ AGGGAGCTATAAGAGGATGTGAAGTTTTAAAACCTGAAATTGTTTTTTAAAGCACTTAAGCACCTCCATATTATG ACTTGGTGGGTCACCCCTTAGCTTCCTCCCTCTCCCACCAAGACTATGAGAACTTCAGCTGATAGCTGGGGGGCTC ${\tt CCCAGATGAGGATGCAGGGATTTGGGAGCAGTGGAAGAGGGTGCCCAACCTTGGGTTGGACCAACCCTTGGCTCG}$ CAGCTCAACTCTGCTTCCCGCATTCCTGCTCCACGTGTCCCAGCTTCTCCCCTGTGACGGGAAGGCAGGTGTGAC GGGATTGTGATGGGAG

MCDFTEDQTAEFKEAFQLFDRTGDGKILYSQCGDVMRALGQNPTNAEVLKVLGNPKSDEMNVKVLDFEHFLPMLQ TVAKNKDQGTYEDYVEGLRVFDKEGNGTVMGAEIRHVLVTLGEKMTEEEVEMLVAGHEDSNGCINYEAFVRHILS

MRALGQNPTNAEVLKVLGNPKSDEMNVKVLDFEHFLPMLQTVAKNKDQGTYEDYVEGLRVFDKEGNGTVMGAEIR HVLVTLGEKMTEEEVEMLVAGHEDSNGCINYEELVRMVLNG

3961/6881 FIGURE 3651

 ${\tt MCDFTEDQTADLIPSTEFKEAFQLFDRTGDGKILYSQCGDVMRALGQNPTNAEVLKVLGNPKSDEMNVKVLDFEH} \\ {\tt FLPMLQTVAKNKDQGTYEDYVEGLRVFDKEGNGTVMGAEIRHVLVTLGEKMTEEEVEMLVAGHEDSNGCINYEAF} \\ {\tt VRHILSG}$

3962/6881 FIGURE 3652

CGAGGGGACTCTGACCACAGCCTGTGGCTGGGAAGGGAGACAGAGGCGGCGGCGCTCAGGGGAAACGAGGCTGC ${\tt AGTGGTGGTAGGAAGATG}{\tt TCGGGCGAGGACGAGCAACAGGAGCAACTATCGCTGAGGACCTGGTCGTGACCC}$ AAGTATAAGATGGGGGGCGACATCGCCAACAGGGTACTTCGGTCCTTGGTGGAAGCATCTAGCTCAGGTGTGTCG GTACTGAGCCTGTGTGAGAAAGGTGATGCCATGATTATGGAAGAAACAGGGAAAATCTTCAAGAAAAGGAA ATGAAGAAAGGTATTGCTTTTCCCACCAGCATTTCGGTAAATAACTGTGTATGTCACTTCTCCCCTTTGAAGAGC GACCAGGATTATATCTCAAGGAAGGTGACTTGGTAAAAATTGACCTTGGGGTCCATGTGGATGGCTTCATCGCT AATGTAGCTCACACTTTTGTGGTTGATGTAGCTCAGGGGACCCAAGTAACAGGGAGGAAAGCAGATGTTATTAAG TGGAACAAGTTGCCCACTCATTTAACTGCACGCCAATAGAAGGTATGCTGTCACACCAGTTGAAGCATGTC ATCGATGGAGAAAAAACCATTATCCAGAATCCCACAGACCAGCAGAAG<u>TAG</u>GTGCCAACCCTACTTATTACCTTC TACCACAAGACTAGTCATCAGGTTTTTTTCTATACTCCCAACTGAATCTTGTCCGCCCTCTACTCCATGTTTT CAGGAGTGACCTGTTGCTCTTAATATTCCCTTTCTCTAGGCCGGGCGCGGTGGCTCACGCCTGTAATCCCAGCAC TCTCTACTAAAAACTACAAAAATGAGCCAGGCCTGGTGGTTTTGTGCCTATAGTCCCAGCTACTTGGGAGGCTGAG ${\tt GCAGGAGAGTTGCTTGGACCCGGGAGGTTGCAGTTGCAGTGAGCTTGAGATTGTGCCACTCCAGCCTGGGT}$ GACAGAATGAGACTCTGTGTCGAAGGACCATGAAAAAGCTGAATTTGAGGTACATGAAGTATATGCTGTGGATGT ${\tt TCTCGTCAGCTCAGGAGAGGGCAAGGTGAGGAGAGTACCAGAGTTGGCAAAGAGGGGTGACTGAGAGTGTTCACC}$ AGACCAAATGTTACTTAAATTACTCTTTCAGGCCAAGGATGCAGGACAGAGAACCACTATTTACAAACGAGACCC CTCTAAACAGTATGG

 ${\tt MSGEDEQQEQTIAEDLVVTKYKMGGDIANRVLRSLVEASSSGVSVLSLCEKGDAMIMEETGKIFKKEKEMKKGIAFTSISVNNCVCHFSPLKSDQDYILKEGDLVKIDLGVHVDGFIANVAHTFVVDVAQGTQVTGRKADVIKAAHLCAEAALRLVKPGNQNTQVTEAWNKVAHSFNCTPIEGMLSHQLKQHVIDGEKTIIQNPTDQQK}$

^{3965/6881} **FIGURE 3655**

MRAKWRKKRMRRLKRKRRKMRQRSK

 ${\tt MTKKRRNNGRAKKGRGHVQPIRCTNCARCVPKDKAIKKFVIRNIVEAAAVRDISEASVFDAYVLPKLYVKLHYCVSCAIHSKVVRNRSREARKDRTPPPRFRPAGAAPRPPPKPM}$

3968/6881 FIGURE 3658

TTGACAAGAGCGAGAGGTATACTGCGTTCCATCCCGACCCGGGGCCACGGTACTGGGCCCTGTTTCCCCCTCCTC GGCCCCGAGAGCCAGGGTCCGCCTTCTGCAGGGTTCCCAGGCCCCCGCTCCAGGGCCGGGCTGACCCGACTCGC TGGCGCTTCATGGAGAACTTCCAAAAGGTGGAAAAGATCGGAGAGGGCACGTACGGAGTTGTGTACAAAGCCAGA ${\tt AACAAGTTGACGGGAGAGGTGGTGGCGCTTAAGAAAATCCGCCTGGACACGTGAACTGAGGGTGTGCCCAGTACT}$ GCCATCCGAGAGATCTCTCTGCTTAAGGAGCTTAACCATCCTAATATTGTCAAGCTGCTGGATGTCATTCACACA GAAAATAAACTCTACCTGGTTTTTGAATTTCTGCACCAAGATCTCAAGAAATTCATGGATGCCTCTGCTCTCACT GGCATTCCTCTCCCCTCATCAAGAGCTATCTGTTCCAGCTGCTCCAGGGCCTAGCTTTCTGCCATTCTCATCGG GTCCTCCACCGAGACCTTAAACCTCAGAATCTGCTTATTAACACAGAGGGGGCCATCAAGCTAGCAGACTTTGGA CTAGCCAGAGCTTTTGGAGTCCCTGTTCGTACTTACACCCATGAGGTGGTGACCCTGTGGTACCGAGCTCCTGAA ATCCTCCTGGGCTGCAAATATTATTCCACAGCTGTGGACATCTGGAGCCTGGGCTGCATCTTTGCTGAGATGGTG ACTCGCCGGGCCCTATTCCCTGGAGATTCTGAGATTGACCAGCTCTTCCGGATCTTTCGGACTCTGGGGACCCCA GATGAGGTGGTGGCCAGGAGTTACTTCTATGCCTGATTACAAGCCAAGTTTCCCCAAGTGGGCCCGGCAAGAT TTTAGTAAAGTTGTACCTCCCCTGGATGAAGATGGACGGAGCTTGTTATCGCAAATGCTGCACTACGACCCTAAC GGGAATACAGGGGTGAAAGGGGGGAACCAGTGAAAATGAAAGGAAGTTTCAGTATTAGATGCACTTAAGTTAGCC TCCACCACCCTTTCCCCCTTCTCTTAGTTATTGCTGAAGAGGGTTGGTATAAAAATAATTTTAAAAAAAGCCTTCC TACACGTTAGATTTGCCGTACCAATCTCTGAATGCCCCATAATTATTATTTCCAGTGTTTGGGATGACCAGGATC ${\tt CCAAGCCTCCTGCTGCCACAATGTTTATAAAGGCCAAATGATAGCGGGGGCTAAGTTGGTGCTTTTGAGAACCAA}$ GTAAAACAAAACCACTGGGAGGAGTCTATTTTAAAGAATTCGGTTGAAAAAATAGATCCAATCAGTTTATACCCT AGTTAGTGTTTTGCCTCACCTAATAGGCTGGGAGACTGAAGACTCAGCCCGGGTGGGGCTGCAGAAAAATGATTG GCCCCAGTCCCCTTGTTTGTCCCTTCTACAGGCATGAGGAATCTGGGAGGCCCTGAGACAGGGATTGTGCTTCAT TCCAATCTATTGCTTCACCATGGCCTTATGAGGCAGGTGAGAGATGTTTGAATTTTTCTCTTCCTTTTAGTATTC TTAGTTGTTCAGTTGCCAAGGATCCCTGATCCCATTTTCCTCTGACGTCCACCTCCTACCCCATAGGAGTTAGAA TATTTCTTTAAAAGAAGGATGAACAATTATATTTATATTTCAGGTTATATCCAATAGTAGAGTTGGCTTTTTTT AAAGCATTTTTTTTTTTTTTTGTCTCTCTCTCACCCTTGTCCTTGAGTGCTCTTGCTATTAACGTTATTTGTAAT TTAGTTTGTAGCTCATTAAAAAAATGTGCCTAGTTTTATA

GTACCCAGAAACCAGGACTGGCTTGGTGTCTCAAGGCAACTCAGAACCAAAGCCTGGAACAGGCAGCTGTATCCA GAGTGGACAGAAGCCCAGAGACTTGACTGCTGGAGAGGTGGTCAAGTGTCCCTCAAGGTCAGTAATGATGGGCCT ACACTGATTGGTGCAAATGCCTCCTTCTCTATTGCCTTGAACTTCCCTGGAAGCCAAAAGGTATTGCCAGATGGG CAGGTTATCTGGGTCAACAATACCATCATCAATGGGAGCCAGGTGTGGGGAGGACAGCCAGTGTATCCCCAGGAA ACTGACGATGCCTGCATCTTCCCTGATGGTGGACCTTGCCCATCTGGCTCTTGGTCTCAGAAGAGAAGCTTTGTT ${\tt TATGTCTGGAAGACCTGGGGCCAATACTGGCAAGTTCTAGGGGGCCCAGTGTCTGGGCTGAGCATTGGGACAGGC}$ AGGGCAATGCTGGGCACACACACCATGGAAGTGACTGTCTACCATCGCCGGGGATCCCGGAGCTATGTGCCTCTT GCTCATTCCAGCTCAGCCTTCACCATTACTGACCAGGTGCCTTTCTCCGTGAGCGTGTCCCAGTTGCGGGCCTTG GATGGAGGGAACAAGCACTTCCTGAGAAATCAGCCTCTGACCTTTGCCCTCCAGCTCCATGACCCCAGTGGCTAT CTGGCTGAAGCTGACCTCTCCTACACCTGGGACTTTGGAGACAGTAGTGGAACCCTGATCTCTCGGGCACTTGTG GTCACTCATACTTACCTGGAGCCTGGCCCAGTCACTGCCCAGGTGGTCCTGCAGGCTGCCATTCCTCTCACCTCC TGTGGCTCCTCCCCAGTTCCAGGCACCACAGATGGGCCACAGGCCAACTGCAGAGGCCCCTAACACCACAGCTGGC ${\tt CAAGTGCCTACTACAGAAGTTGTGGGTACTACACCTGGTCAGGCGCCCAACTGCAGAGCCCTCTGGAACCACTCT}$ GTGCAGGTGCCAACCACTGAAGTCATAAGCACTGCACCTGTGCAGATGCCAACTGCAGAGAGCACAGGTATGACA ${\tt CCTGAGAAGGTGCCAGTTTCAGAGGTCATGGGTACCACACTGGCAGAGATGTCAACTCCAGAGGCTACAGGTATG}$ ${\tt ACCACAGCTAGAGAGCTACCTATCCCTGAGCCTGAAGGTCCAGATGCCAGCTCAATCATGTCTACGGAAAGTATT}$ ACAGGTTCCCTGGGCCCCCTGCTGGATGGTACAGCCACCTTAAGGCTGGTGAAGAGACAAGTCCCCCTGGATTGT GTTCTGTATCGATATGGTTCCTTTTCCGTCACCCTGGACATTGTCCAGGGTATTGAAAGTGCCGAGATCCTGCAG GCTGTGCCGTCGGTGAGGGGGATGCATTTGAGCTGACTGTCCTGCCAAGGCGGGCTGCCCAAGGAAGCCTGC ATGGAGATCTCATCGCCAGGGTGCCAGCCCCTGCCCAGCGGCTGTGCCAGCCTGTGCTACCCAGCCCAGCCTGC CAGCTGGTTCTGCACCAGATACTGAAGGGTGGCTCGGGGACATACTGCCTCAATGTGTCTCTGGCTGATACCAAC AGCCTGGCAGTGGTCAGCACCCAGCTTATCATGCCTGGTCAAGAAGCAGGCCTTGGGCAGGTTCCGCTGATCGTG GGCATCTTGCTGGTGTTGATGGCTGTGGTCCTTGCATCTCTGATATATAGGCGCAGACTTATGAAGCAAGACTTC GAGAATAGCCCCCTCCTCAGTGGGCAGCAGGTCTGA

MDLVLKRCLLHLAVIGALLAVGATKVPRNQDWLGVSRQLRTKAWNRQLYPEWTEAQRLDCWRGGQVSLKVSNDGP
TLIGANASFSIALNFPGSQKVLPDGQVIWVNNTIINGSQVWGGQPVYPQETDDACIFPDGGPCPSGSWSQKRSFV
YVWKTWGQYWQVLGGPVSGLSIGTGRAMLGTHTMEVTVYHRRGSRSYVPLAHSSSAFTITDQVPFSVSVSQLRAL
DGGNKHFLRNQPLTFALQLHDPSGYLAEADLSYTWDFGDSSGTLISRALVVTHTYLEPGPVTAQVVLQAAIPLTS
CGSSPVPGTTDGHRPTAEAPNTTAGQVPTTEVVGTTPGQAPTAEPSGTTSVQVPTTEVISTAPVQMPTAESTGMT
PEKVPVSEVMGTTLAEMSTPEATGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELPIPEPEGPDASSIMSTESI
TGSLGPLLDGTATLRLVKRQVPLDCVLYRYGSFSVTLDIVQGIESAEILQAVPSGEGDAFELTVSCQGGLPKEAC
MEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYCLNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIV
GILLVLMAVVLASLIYRRLMKQDFSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV

3972/6881 FIGURE 3662

MAVEGGMKCVKFLLYVLLLAFCACAVGLIAVGVGAQLVLSQTIIQGATPGSLLPVVIIAVGVFLFLVAFVGCCGA CKENYCLMITFAIFLSLIMLVEVAAAIAGYVFRDKVMSEFNNNFRQQMENYPKNNHTASILDRMQADFKCCGAAN YTDWEKIPSMSKNRVPDSCCINVTVGCGINFNEKAIHKEGCVEKIGGWLRKNVLVVAAAALGIAFVEVLGIVFAC CLVKSIRSGYEVM

GGCACGAGGAGCTGTGAGGGTCAAGCACAGCTATCCATCAGATGATCTACTTTCAGCCTTCCTGAGTCCCAGACA ATAGAAGACAGGTGGCTGTACCCTTGGCCAAGGGTAGGTGTGGCAGTGGTGTCTGCTGTCACTGTGCCCTCATTG GCCCCCAGCAATCAGACTCAACAGACGGAGCAACTGCCATCCGAGGCTCCTGAACCAGGGCCATTCACCAGGAGC **ATG**CGGCTCCCTGATGTCCAGCTCTGGCTGCTGCTGTGGGCACTGGTGCGAGCACAGGGGACAGGGTCTGTG TGTCCCTCCTGTGGGGGCTCCAAACTGGCACCCCAAGCAGAACGAGCTCTGGTGCTGGAGCTAGCCAAGCAGCAA ATCCTGGATGGGTTGCACCTGACCAGTCGTCCCAGAATAACTCATCCTCCACCCCAGGCAGCCTGACCAGAGCC CTCCGGAGACTACAGCCAGGGAGTGTGGCTCCAGGGAATGGGGAGGGTGATCAGCTTTGCTACTGTCACAGAC TCCACTTCAGCCTACAGCTCCCTGCTCACTTTTCACCTGTCCACTCCTCGGTCCCACCACCTGTACCATGCCCGC CTGTGGCTGCACGTGCTCCCCACCCTTCCTGGCACTCTTTGCTTGAGGATCTTCCGATGGGGACCAAGGAGGAGG CGCCAAGGGTCCCGCACTCTCCTGGCTGAGCACCACATCACCAACCTGGGCTGGCATACCTTAACTCTGCCCTCT GTTACTGGACAACCGAGGCGGCTCTTGGACACAGCAGGACACCAGCAGCCCTTCCTAGAGCTTAAGATCCGAGCC AATGAGCCTGGAGCAGGCCGGGCCAGGAGGAGGACCCCCACCTGTGAGCCTGCGACCCCCTTATGTTGCAGGCGA GACCATTACGTAGACTTCCAGGAACTGGGATGGCGGGACTGGATACTGCAGCCCGAGGGGTACCAGCTGAATTAC TGCAGTGGGCAGTGCCCTCCCCACCTGGCTGGCAGCCCAGGCATTGCTGCCTCTTTCCATTCTGCCGTCTTCAGC CTCTACCTGGATCATAATGGCAATGTGGTCAAGACGGATGTGCCAGATATGGTGGTGGAGGCCTGTGGCTGCAGC TAGCAAGAGGACCTGGGGCTTTGGAGTGAAGAGACCAAGATGAAGTTTCCCAGGCACAGGGCATCTGTGACTGGA GGCATCAGATTCCTGATCCACACCCAACCCAACCACCTGGCAATATGACTCACTTGACCCCTATGGGACCC AAATGGGCACTTTCTTGTCTGAGACTCTGGCTTATTCCAGGTTGGCTGATGTGTTGGGAGATGGGTAAAGCGTTT CTTCTAAAGGGGTCTACCCAGAAAGCATGATTTCCTGCCCTAAGTCCTGTGAGAAGATGTCAGGGACTAGGGAGG GAGGGAGGGAAGGCAGAGAAAATTACTTAGCCTCTCCCAAGATGAGAAAGTCCTCAAGTGAGGGGAGGAGGAAG CAGATAGATGGTCCAGCAGGCTTGAAGCAGGGTAAGCAGGCTGGCCCAGGGTAAGGGCTGTTGAGGTACCTTAAG ATGAGGCACTAAGCCTAAGAAGTTCCCTGGTTTTTCCCAGGGGACAGGACCCACTGGGAGACAAGCATTTATACT TTCTTTCTTTTTTTTTTTTTTTTGAGATCGAGTCTCGCTCTGTCACCAGGCTGGAGTGCAGTGACACGATCTTG GCTCACTGCAACCTCCGTCTCCTGGGTTCAAGTGATTCTTCTGCCTCAGCCTCCCGAGCAGCTGGGATTACAGGC GCCCACTAATTTTTGTATTCTTAGTAGAAACGAGGTTTCAACATGTTGGCCAGGATGGTCTCAATCTCTTGACCT CTTGATCCACCCGACTTGGCCTCCCGAAGTGATGAGATTATAGGCGTGAGCCACCGCGCCTGGCTTATACTTTCT TAATAAAAAGGAGAAAATCAACAAATGTGAGTCATAAAGAAGGGTTAGGGTGATGGTCCAGAGCAACAGTT CTTCAAGTGTACTCTGTAGGCTTCTGGGAGGTCCCTTTTCAGGGGTGTCCACAAAGTCAAAGCTATTTTCATAAT AATACTAACATGTTATTTGCCTTTTGAATTCTCATTATCTTAAAATTGTATTGTGGAGTTTTCCAGAGGCCGTGT

MRLPDVQLWLVLLWALVRAQGTGSVCPSCGGSKLAPQAERALVLELAKQQILDGLHLTSRPRITHPPPQAALTRA LRRLQPGSVAPGNGEEVISFATVTDSTSAYSSLLTFHLSTPRSHHLYHARLWLHVLPTLPGTLCLRIFRWGPRRR RQGSRTLLAEHHITNLGWHTLTLPSSGLRGEKSGVLKLQLDCRPLEGNSTVTGQPRRLLDTAGHQQPFLELKIRA NEPGAGRARRRTPTCEPATPLCCRRDHYVDFQELGWRDWILQPEGYQLNYCSGQCPPHLAGSPGIAASFHSAVFS LLKANNPWPASTSCCVPTARRPLSLLYLDHNGNVVKTDVPDMVVEACGCS

CCCAGACTCCAGCCCTGGACCGCGCATCCCGAGCCCCAGACCGCGCCCAGACTGTCCCCACACCCTCTCTGAGAC GCCATGTTCAACTCGATGACCCCACCACCACTCAGTAGCTATGGCGAGCCCTGCTGTCTCCGGCCCCTCCCCAGT CCCCACAGTTATGGGCCAGCCAGAGAGACCAACAGCTGCACCGAGGGCCCACTCTTTTCTTCTCCCCGGAGTGCA GTCAAGTTGACCAAGAAGCGGGCACTGTCCATCTCACCTCTGTCGGATGCCAGCCTGGACCTGCAGACGGTTATC CGCACCTCACCCAGCTCCCTCGTAGCTTTCATCAACTCGCGATGCACATCTCCAGGAGGCTCCTACGGTCATCTC GGGGTCCAGCCTTGTGGTCCCCATGACTCTGCCCGGGGTGGGATGATCCCACATCCTCAGTCCCGGGGACCCTTC CCAACTTGCCAGCTGAAGTCTGAGCTGGACATGCTGGTTGGCAAGTGCCGGGAGGAACCCTTGGAAGGTGATATG GAGAAGCGTGAGCCTGAATCTGTGTATGAAACTGACTGCCGTTGGGATGGCTGCAGCCAGGAATTTGACTCCCAA GAGCAGCTGGTGCACCACATCAACAGCGAGCACATCCACGGGGAGCGGAAGGAGTTCGTGTGCCACTGGGGGGGC TGCTCCAGGGAGCTGAGGCCCTTCAAAGCCCAGTACATGCTGGTGGTTCACATGCGCAGACACACTGGCGAGAAG CCACACAAGTGCACGTTTGAAGGGTGCCGGAAGTCATACTCACGCCTCGAAAACCTGAAGACGCACCTGCGGTCA CACACGGGTGAGAAGCCATACATGTGTGAGCACGAGGGCTGCAGTAAAGCCTTCAGCAATGCCAGTGACCGAGCC GATCCTAGCTCGCTGCGAAAACATGTCAAGACAGTGCATGGTCCTGACGCCCATGTGACCAAACGGCACCGTGGG GATGGCCCCTGCCTCGGGCACCATCCATTTCTACAGTGGAGCCCAAGAGGGAGCGGGAAGGAGGTCCCATCAGG GAGGAAAGCAGACTGACTGTGCCAGAGGGTGCCATGAAGCCACAGCCAAGCCCTGGGGCCCAGTCATCCTGCAGC ACTGAAGACCTCTCCAGCTTGGACGAGGGACCTTGCATTGCTGGCACTGGTCTGTCCACTCTTCGCCGCCTTGAG AACCTCAGGCTGGACCAGCTACATCAACTCCGGCCAATAGGGACCCGGGGTCTCAAACTGCCCAGCTTGTCCCAC ACCGGTACCACTGTGTCCCGCCGCGTGGGCCCCCCAGTCTCTCTTGAACGCCGCAGCAGCAGCTCCAGCAGCATC AGCTCTGCCTATACTGTCAGCCGCCGCTCCTCCCTGGCCTCTCCTTTCCCCCCTGGCTCCCACCAGAGAATGGA GCATCCTCCCTGCCTGCCCTATGCCTGCCCAGCACTACCTGCTTCGGGCAAGATATGCTTCAGCCAGAGGGGGT GGTACTTCGCCCACTGCAGCATCCAGCCTGGATCGGATAGGTGGTCTTCCCATGCCTCCTTGGAGAAGCCGAGCC GAGTATCCAGGATACAACCCCAATGCAGGGGTCACCCGGAGGGCCAGTGACCCAGGCCCAGGCTGACCGTCCT AACTTTGATCCTTACCTCCCAACCTCTGTCTACTCACCACAGCCCCCCAGCATCACTGAGAATGCTGCCATGGAT GCTAGAGGGCTACAGGAAGACCAGAAGTTGGGACCTCCATGGTGGGCAGTGGTCTGAACCCCTATATGGACTTC CCACCTACTGATACTCTGGGATATGGGGGGACCTGAAGGGGCAGCAGCTGAGCCTTATGGAGCGAGGGGTCCAGGC TCTCTGCCTCTTGGGCCTGGTCCACCACCACCACCACCACCCTGTCCCCAGCAGGCCTCATATCCTGAC CCCACCCAAGAAACATGGGGTGAGTTCCCTTCCCACTCTGGGCTGTACCCAGGCCCCAAGGCTCTAGGTGGAACC TACAGCCAGTGTCCTCGACTTGAACATTATGGACAAGTGCAAGTCAAGCCAGAACAGGGGTGCCCAGTGGGGTCT GACTCCACAGGACTGGCACCCTGCCTCAATGCCCACCCCAGTGAGGGGCCCCCACATCCACAGCCTCTCTTTTCC CATTACCCCCAGCCCTCTCCCCCAATATCTCCAGTCAGGCCCCTATACCCAGCCACCCCTGATTATCTTCCT AATTATGTTCAATCTCAACAGGAGCTACTGTGGGAGGGTGGGGGGCAGGGAAGATGCCCCCGCCCAGGAACCTTCC TACCAGAGTCCCAAGTTTCTGGGGGGTTCCCAGGTTAGCCCAAGCCGTGCTAAAGCTCCAGTGAACACATATGGA CCTGGCTTTGGACCCAACTTGCCCAATCACAAGTCAGGTTCCTATCCCACCCCTTCACCATGCCATGAAAATTTT GTAGTGGGGGCAAATAGGGCTTCACATAGGGCAGCAGCACCTCGACTTCTGCCCCCATTGCCACTTGCTAT GGGCCTCTCAAAGTGGGAGGCACAAACCCCAGCTGTGGTCATCCTGAGGTGGGCAGGCTAGGAGGGGGTCCTGCC TTGTACCCTCCTCCCGAAGGACAGGTATGTAACCCCCTGGACTCTTTGATCTTGACAACACTCAGCTGGACTTT GTGGCTATTCTGGATGAGCCCCAGGGGCTGAGTCCTCCTCCTTCCCATGATCAGCGGGGCAGCTCTGGACATACC CCACCTCCCTCTGGGCCCCCCAACATGGCTGTGGGCAACATGAGTGTCTTACTGAGATCCCTACCTGGGGAAACA GAATTCCTCAACTCTAGTGCC<u>TAA</u>AGAGTAGGGAATCTCATCCATCACAGATCGCATTTCCTAAGGGGTTTCTAT CCTTCCAGAAAAATTGGGGGAGCTGCAGTCCCCTGCACAAGATGCCCCAGGGATGGGAGGTATGGGCTGGGGGCT ATGTATAGTCTGTATACGTTTTGAGGAGAAATTTGATAATGACACTGTTTCCTGATAATAAAGGAACTGCATCAG

^{3978/6881} **FIGURE 3667A**

MFNSMTPPPISSYGEPCCLRPLPSQGAPSVGTEGLSGPPFCHQANLMSGPHSYGPARETNSCTEGPLFSSPRSAV KLTKKRALSISPLSDASLDLQTVIRTSPSSLVAFINSRCTSPGGSYGHLSIGTMSPSLGFPAQMNHQKGPSPSFG VQPCGPHDSARGGMIPHPQSRGPFPTCQLKSELDMLVGKCREEPLEGDMSSPNSTGIQDPLLGMLDGREDLEREE KREPESVYETDCRWDGCSQEFDSQEQLVHHINSEHIHGERKEFVCHWGGCSRELRPFKAQYMLVVHMRRHTGEKP HKCTFEGCRKSYSRLENLKTHLRSHTGEKPYMCEHEGCSKAFSNASDRAKHQNRTHSNEKPYVCKLPGCTKRYTD PSSLRKHVKTVHGPDAHVTKRHRGDGPLPRAPSISTVEPKREREGGPIREESRLTVPEGAMKPQPSPGAQSSCSS DHSPAGSSAANTDSGVEMTGNAGGSTEDLSSLDEGPCIAGTGLSTLRRLENLRLDQLHQLRPIGTRGLKLPSLSHT GTTVSRRVGPPVSLERRSSSSSSISSAYTVSRRSSLASPFPPGSPPENGASSLPGLMPAQHYLLRARYASARGGG TSPTAASSLDRIGGLPMPPWRSRAEYPGYNPNAGVTRRASDPAQAADRPAPARVQRFKSLGCVHTPPTVAGGGQN FDPYLPTSVYSPQPPSITENAAMDARGLQEEPEVGTSMVGSGLNPYMDFPPTDTLGYGGPEGAAAEPYGARGPGS LPLGPGPPTNYGPNPCPQQASYPDPTQETWGEFFSHSGLYPGPKALGGTYSQCPRLEHYGQVQVKPEQGCPVGSD STGLAPCLNAHPSEGPPHPQPLFSHYPQPSPPQYLQSGPYTQPPPDYLPSEPRPCLDFDSPTHSTGQLKAQLVCN YVQSQQELLWEGGGREDAPAQEPSYQSPKFLGGSQVSPSRAKAPVNTYGPGFGPNLPNHKSGSYPTPSPCHENFV VGANRASHRAAAPPRLLPPLPTCYGPLKVGGTNPSCGHPEVGRLGGGPALYPPPEGQVCNPLDSLDLDNTQLDFV AILDEPQGLSPPPSHDQRGSSGHTPPPSGPPNMAVGNMSVLLRSLPGETEFLNSSA

ATCAGCGAGGGATTCACGGCGAA<u>ATG</u>AGACTGTTCGTGAGTGATGGCGTCCCGGGTTGCTTGCCGGTGCTGGCCG CCGCCGGGAGAGCCCGGGGCAGAGCAGAGGTGCTCATCAGCACTGTAGGCCCGGAAGATTGTGTGGTCCCGTTCC TGACCCGGCCTAAGGTCCCTGTCTTGCAGCTGGATAGCGGCAACTACCTCTTCTCCACTAGTGCAATCTGCCGAT AGCCAGCTTTGTCTGCTGCCCTGTACTATTTAGTGGTCCAAGGCAAGAAGGGGGAAGATGTTCTTGGTTCAGTGC TAGCCGACATTGTTTTGTGGGGAGCCCTATACCCATTACTGCAAGATCCCGCCTACCTCCCTGAGGAGCTGAGTG CCCTGCACAGCTGGTTCCAGACACTGAGTACCCAGGAACCATGTCAGCGAGCTGCAGAGACTGTACTGAAACAGC AAGGTGTCCTGGCTCTCCGGCCTTACCTCCAAAAGCAGCCCCAGCCCAGCCCCGCTGAGGGAAGGGCTGTCACCA ATGAGCCTGAGGAGGAGGAGCTGGCTACCCTATCTGAGGAGGAGATTGCTATGGCTGTTACTGCTTGGGAGAAGG GCCTAGAAAGTTTGCCCCCGCTGCGGCCCCAGCAGAATCCAGTGTTGCCTGTGGCTGGAGAAAGGAATGTGCTCA TCACCAGTGCCCTCCCTTACGTCAACAATGTCCCCCACCTTGGGAACATCATTGGTTGTGTGCTCAGTGCCGATG TCTTTGCCAGGTACTCTCGCCTCCGCCAGTGGAACACCCTCTATCTGTGTGGGACAGATGAGTATGGTACAGCAA CAGAGACCAAGGCTCTGGAGGAGGGACTAACCCCCCAGGAGATCTGCGACAAGTACCACATCATCCATGCTGACA TCTACCGCTGGTTTAACATTTCGTTTGATATTTTTGGTCGCACCACCACCACCACAGCAGACCAAAATCACCCAGG ACATTTTCCAGCAGTTGCTGAAACGAGGTTTTGTGCTGCAAGATACTGTGGAGCAACTGCGATGTGAGCACTGTG $\tt CTCGCTTCCTGGCTGACCGCTTCGTGGAGGGCGTGTGTCCCTTCTGTGGCTATGAGGAGGCTCGGGGTGACCAGT$ GTGACAAGTGTGGCAAGCTCATCAATGCTGTCGAGCTTAAGAAGCCTCAGTGTAAAGTCTGCCGATCATGCCCTG TGGTGCAGTCGAGCCAGCACCTGTTTCTGGACCTGCCTAAGCTGGAGAAGCGACTGGAGGAGTGGTTGGGGAGGA CATTGCCTGGCAGTGACTGGACACCCAATGCCCAGTTTATCACCCGTTCTTGGCTTCGGGATGGCCTCAAGCCAC GCTGCATAACCCGAGACCTCAAATGGGGAACCCCTGTACCCTTAGAAGGTTTTGAAGACAAGGTATTCTATGTCT GGTTTGATGCCACTATTGGCTATCTGTCCATCACAGCCAACTACACAGACCAGTGGGAGAGATGGTGGAAGAACC CAGAGCAAGTGGACCTGTATCAGTTCATGGCCAAAGACAATGTTCCTTTCCATAGCTTAGTCTTTCCTTGCTCAG CCCTAGGAGCTGAGGATAACTATACCTTGGTCAGCCACCTCATTGCTACAGAGTACCTGAACTATGAGGATGGGA AATTCTCTAAGAGCCGCGGTGTGGGAGTGTTTGGGGACATGGCCCAGGACACGGGGATCCCTGCTGACATCTGGC ATTCTGAGCTGCTTAACAACCTGGGCAACTTCATCAACAGAGCTGGGATGTTTGTGTCTAAGTTCTTTGGGGGGCT ATGTGCCTGAGATGGTGCTCACCCCTGATGATCAGCGCCTGCTGGCCCATGTCACCCTGGAGCTCCAGCACTATC ACCAGCTACTTGAGAAGGTTCGGATCCGGGATGCCTTGCGCAGTATCCTCACCATATCTCGACATGGCAACCAAT ATATTCAGGTGAATGAGCCCTGGAAGCGGATTAAAGGCAGTGAGGCTGACAGGCAACGGGCAGGAACAGTGACTG GCTTGGCAGTGAATATAGCTGCCTTGCTCTGTCATGCTTCAGCCTTACATGCCCACGGTTAGTGCCACAATCC AGGCCCAGCTGCAGCTCCCACCTCCAGCCTGCAGTATCCTGCTGACAAACTTCCTGTGTACCTTACCAGCAGGAC ACCAGATTGGCACAGTCAGTCCCTTGTTCCAAAAATTGGAAAATGACCAGATTGAAAGTTTAAGGCAGCGCTTTG GAGGGGGCCAGGCAAAAACGTCCCCGAAGCCAGCAGTTGTAGAGACTGTTACAACAGCCAAGCCACAGCAGATAC AGGTTGCTGCGGAGGTGGCGAAACTCTTGGATCTAAAGAAACAGTTGGCTGTAGCTGAGGGGAAACCCCCTGAAG ${\tt CCCCTAAAGGCAAGAAGAAAAG{\tt TAA}}$ AAGACCTTGGCTCATAGAAAGTCACTTTAATAGATAGGGACAGTAATAA **ATAAATGTACAATCTCTATA**

MRLFVSDGVPGCLPVLAAAGRARGRAEVLISTVGPEDCVVPFLTRPKVPVLQLDSGNYLFSTSAICRYFFLLSGW
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ALYPLLQDPAYLPEELSALHSWFQTLSTQEPCQRAAETVLKQQGVLALRPYLQKQPQPSPAEGRAVTNEPEEEEL
ATLSEEEIAMAVTAWEKGLESLPPLRPQQNPVLPVAGERNVLITSALPYVNNVPHLGNIIGCVLSADVFARYSRL
RQWNTLYLCGTDEYGTATETKALEEGLTPQEICDKYHIIHADIYRWFNISFDIFGRTTTPQQTKITQDIFQQLLK
RGFVLQDTVEQLRCEHCARFLADRFVEGVCPFCGYEEARGDQCDKCGKLINAVELKKPQCKVCRSCPVVQSSQHL
FLDLPKLEKRLEEWLGRTLPGSDWTPNAQFITRSWLRDGLKPRCITRDLKWGTPVPLEGFEDKVFYVWFDATIGY
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GVFGDMAQDTGIPADIWRFYLLYIRPEGQDSAFSWTDLLLKNNSELLNNLGNFINRAGMFVSKFFGGYVPEMVLT
PDDQRLLAHVTLELQHYHQLLEKVRIRDALRSILTISRHGNQYIQVNEPWKRIKGSEADRQRAGTVTGLAVNIAA
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GAGGCTCGGGCTCCACCGACCCTCCCACCCCTCCCACTCACCCTCTGGGCCGCGACTGCGCAGGGCGGGGC CGGCCGAACCATGGGCCGCGGTGTGGGCTAAGCTGGTGGCCCCGGCTTTAGACTGGACCCCACAATGTTTGCAGA GGCCCTGTGGCCACATCTGTCCCCATCGGCTGGCAGCGCTGTGTGCGAGAGGGTGCTGTGCTCTACATCAGTCCA AGTGGCACAGAGCTGTCTTCCTTGGAGCAAACCCGGAGCTACCTCCTCAGCGATGGGACCTGCAAGTGCGGTCTG GAGTGTCCACTTAATGTCCCCAAGGTTTTCAACTTTGACCCTTTGGCCCCGGTTGACCCCGGGTGGGGCTGGGGTTG GGGCCAGCATCAGAGGAGGACATGACCAAGCTGTGCAACCACCGGCGGAAAGCTGTTGCTATGGCAACTCTGTAC ${\tt CCAGGGCCCCCTCTGCCGCCCTCCTGTCGAGTTCCTCCTACAACTCCACTTAATGGGGGTCCTGGCTCCCTT}$ CCCCAGAACCACCTCAGTTTCCCAGGCCTTTCCCACTCTAGCAGGCCCTGGGGGGCTTTTCCCCCCAAGGCTT CCTCCTCCACCTGCTATCAGCCTCAATGCTCCCTCATACAACTGGGGAGCTGCCCTCAGATCCAGCCTGGTGCCC TCTGACCTGGGCTCTCCTCCGGCCCCTCATGCCTCCTCACCACCTTCAGACCCTCCTCTCTCCACTGTAGT GATGCCTTAACACCCCCTCCCCTGCCCCGAGCAATAATCTCCCCGCCCACCCTGGTCCTGCCTCTCAGCCACCA GTGTCTTCAGCCACTATGCACCTGCCCCTGGTCCTGGGGCCCCTGGGAGGGGCCCCCACGGTGGAGGGGCCTGGG GCACCCCCTTCCTTGCTAGCAGCCTACTCTCTGCAGCGGCCAAGGCACAGCATCCCCCACTACCCCCTCCCAGC ACTTTACAGGGCCGAAGGCCCCGTGCCCAGGCACCCTCAGCTTCCCACTCCTCATCACTTCGTCCCTCTCAGCGT CGTCCCGCAGACCCCTACTGTATTTCGATTGCTAGAAGGGAGAGGCCCTCAAACCCCTAGACGGAGCCGTCCT CTGCTGGGACTCCCCACCCTGGCCCTTCCCACTCTGATGGAAGCTTTAACCTTTTGGGGTCAGATGCACACCTT ACCAGTGGCAGCCTCAGCAGTGTGCCAGGTGCCCCTGCCCCACCAGCTGCCTCCAAAGCCCCAGTAGTCCCCAGC GGAGAGGCTTTCCCTTTCCCCAGCCCTGAGCAGGGCCTGGCACTGAGTGGAGCTGGCTTCCCTGGGATGCTTGGG GCCTTGCCTCTCGAGTCTGGGGCAGCCTCCACCTTCTCCATTGCTCAACCACAGTTTATTTGGTGTGCTG ACTGGGGGAGGAGACCTCCCCTGAGCCCCTGCTACCCCACCAGGAGGACCTGGTCCTCCCCTAGCCCCA GGAGAGCCTGAAGGGCCTTCGCTTTTGGTGGCTTCCTTGCTTCCTCCACCACCCTCAGACCTTCTTCCACCTCCT TCAGCACCTCCCAGCAACCTCCTTGCCTCTTTCCTGCCCCTGTTGGCTCTGGGCCCCACAGCTGGGGATGGGGAG ACTGACCCGGGGGCCTCCTCTGGGCAAGGCCCCCTCCAACTCAGGGAGACCCCCCAACTCCTTAGCCCTCTG CTGGGTGCCAGCCTGCTGGGTGACCTGTCTTCACTGACCAGCAGCCCTGGAGCCCTCCCCAGCCTGTTGCAGCCT GCTTCTAGTCCCCTAGCCTGCCTACAGAGTCTCCAGATCCCTCCAGAGCCAGAAGCCCCCTGTCTACCC CTTAGGGGCATTAATGGTGAGGCCAGGCCAGCCCGGGGCCGAAAGCCTGGCAGCCGGCGGAGCCTGGCCGACTG GCCCTCAAATGGGGGACACGTGGTGGCTTCAATGGACAAATGGAAAGGTCCCCAAGAAGAACCCACCATTGGCAG CATAATGGGGAGCTGACGGGGGGTGCTGAGCCCAAGGATCCACCCCCTCCCGGGCCCCATTCTGAGGACCTT AAGGTGCCCCGGGAGTAGTCAGAAAGTCTCGTCGTGGCCGTAGGAGAAAATACAACCCTACCCGGAACAGCAAT AGCTCCCGCCAGGACATTACCTTGGAACCCAGCCCTACAGCCCGAGCAGCTGTCCCTCTGCCTCCCCGGGCCCGC $\verb|CCTGGCCGTCCTGCCAAAAACAAGAGGAGGAAACTGGCCCCATAGCAGCCATACCTGGAGCTGGATCTGACCCTG|\\$ AGAGACGTTGTGATGATGCGACTGAGGATTATGCAACGTGGTCCAACCGGAGCGGCCAGCATGACCAGCTGTCCA GGGGCTGCCTCCTGCCTTTTCTTTTGTAAAGACAAGACCCTTGGGAGTTTTAATTCTGTTTTTGTACTTGCCCTGT GGGGCCTCCACTGCTTTTCTATGGGAGACACTCTTAATTTAACAGATGAGAATATTTTGAAACTCTG

MEALTFWGQMHTFLLPQPSPQGALPSPGTPSSPPCLGPPVAASAVCQVPLPHQLPPKPHVVPSPVLQSPSEGLGM
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LPPPGGPGPPLAPGEPEGPSLLVASLLPPPPSDLLPPPSAPPSNLLASFLPLLALGPTAGDGEGSAEGAGGPSGE
PFSGLGDLSPLLFPPLSAPPTLIALNSALLAATLDPPSGTPPQPCVLSAPQPGPPTSSVTTATTDPGASSLGKAP
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QIPPEQPEAPCLPPESPASALEPEPARPPLSALAPPHGSPDPPVPELLTGRGSGKRGRGGGGLRGINGEARPAR
GRKPGSRREPGRLALKWGTRGGFNGQMERSPRRTHHWQHNGELAEGGAEPKDPPPPGPHSEDLKVPPGVVRKSRR
GRRRKYNPTRNSNSSRQDITLEPSPTARGAVPPTTRARPGRPAKNKRRKLTP

GAGACTTCCTGCTCATCTGCCGCTCCCTTTGCCGCCGCCTTAGCCCGGGACCCGAACCCAGCCTCTCCCCTACCC GAACACCGGCCCCGGCTCCACCGAGGCCCGGGTCCCCCAGCCCGTCTCGCCGCCCATGGCGGACCCTAAATAC GAGTTCGATGCGXXXXXXXXXXXXXXXAGAGGAGCTGACAAGCACAAGTGTGGAACACATCATTGTCAATCCTAAT GCTGCCTATGACAAGTTCAAGGACAAGAGAGTGGGGACAAAGGGACTTGATTTCTCAGATCGTATTGGAAAAACC AAGAGGACAGGATATGAATCTGGAGAATATGAGATGCTTGGAGAGGGTCTGGGAGTGAAGGAGACACCCCAGCAA AAGTACCAGCGCCTACTGCATGAGGTCCAAGAGCTGACAACTGAAGTTGAAAAAATCAAGACGACAGTGAAGGAG TCAGCCACAGAGGAGAAGCTGACCCCTGTGTTGCTGGCTAAACAGCTGGCAGCCCTGAAGCAGCAGCTGGTTGCT TCCCACCTGGAGAAGCTGCTGGGACCAGATGCTGCAATCAACCTTACCGACCCCGATGGCCCCTGGCTAAGCGC CTACTACTGCAGCTGGAAGCAACAAAGAACAGCAAAGGGGGGATCAGGGGGAAAAAACCACTGGGACCCCCCAGAT AGCAGCCTTGTCACTTATGAACTACATTCTCGGCCTGAGCAGGACAAGTTCTCTCAAGCTGCCAAAGTCGCAGAA CTTGAAAAGCGCCTGACAGAGCTGGAGACAGCTGTACGTTGTGATCAGGATGCTCAGAATCCCCTTTCTGCAGGT GATCAAGTGGAGGCTCGGCTACAGAGTGTCCTGGGAAAGGTGAACGAGATTGCCAAGCATAAAGCCTCTGTAGAA GATGCAGATACACAAAGCAAGGTGCACCAGCTATATGAAACTATACAGCGCTGGAGCCCCATTGCCTCCACCCTC CCTGAGCTGGTGCAGAGACTTGTCACCATCAAGCAGCTGCACGAGCAAGCCATGCAGTTTGGTCAGCTCCTGACA CACTTGGATACCACCCAGCAGATGATTGCTAATTCCTTGAAGGACAATACCACCTCTTGACCCAGGTGCAGACA ACCATGCGTGAAAACCTGGCCACAGTTGAGGGGAACTTTGCCAGCATTGATGAACGGATGAAGAAGCTGGGAAAG TGAGCACATTTGGGAGCTGGAGAACAGGGGTTATCCCTACCCCTGTGAACTCTGTTAACAGCTTACATAGGGTTT CCCCTTTACTATAACTCTAGCATCCCCATCCCATTTGACACTGGGGGCAAGGGTTCTTCTTGCATGTGGGGTTTA GGGGATAAGGACGTGGGCCCAGCCACATGCCAACTCATGTCCAATACTGCTTTTGCCTGGTGTGGGGAAGGATTGG GTCTTGTCCCCCAACACGCTTCTGTGGCTGACTGTAATACTGTACAACTGTTTCTGACCATTAAATGCTGTTGT , ACTCTG

MLGEGLGVKETPQQKYQRLLHEVQELTTEVEKIKTTVKESATEEKLTPVLLAKQLAALKQQLVASHLEKLLGPDA AINLTDPDGALAKRLLLQLEATKNSKGGSGGKTTGTPPDSSLVTYELHSRPEQDKFSQAAKVAELEKRLTELETA VRCDQDAQNPLSAGLQGACLMETVELLQAKVSALDLAVLDQVEARLQSVLGKVNEIAKHKASVEDADTQSKVHQL YETIQRWSPIASTLPELVQRLVTIKQLHEQAMQFGQLLTHLDTTQQMIANSLKDNTTLLTQVQTTMRENLATVEG NFASIDERMKKLGK

 ${\tt CCAGGGCCCGTCAGTGGCCTGAGGAGATGGTTGGATCATTCCAAACATTGTCTCAGTGTGGAAACTGAGGCAGAC}$ ${\tt AGTGGTCAGGCAGGACCATATGAGAACTGG} \underline{{\tt ATG}} {\tt TTGGAGCCAGGCTCTAGCCACAGGAGGAGGAGCTGCCGGAACTG}$ ${\tt ACCTTGCTGACCACACTGTTGGAGGGCCCTGGAGATAAGACGCAGCCACCTGAAGAGGAGACTTTGTCCCAAGCC}$ GAGAAAATGTACGTGGACGACTTGGGGCAGATTGTGGAGGGTTATATGGCCACCATGGCTGCTCAGGGGGTCCCC GAGAGTCTTCGAGGCCGTGACAGGATTGTGTTTGGGAATATCCAGCAAATCTATGAGTGGCACCGAGACTATTTC ${\tt CATATGTATGTGGTGTACTGTCAGAATAAGCCCAAGTCAGAGCATGTGGTGTCAGAGTTTGGGGGACAGCTACTTT}$ GAGGAGCTCCGGCAGCAGCTGGGGCACCGCCTGCAGCTGAACGACCTCCTCATCAAACCTGTGCAGCGGATCATG GCTGTGGAGGTCATGTGCTTTGTGCCCAAGCGCTGCAACGATATGATGACGCTGGGGAGATTGCGGGGATTTGAG GGCAAACTGACTGCTCAGGGGAAGCTCTTGGGCCAGGACACTTTCTGGGTCACCGAGCCTGAGGCTGGAGGGCTG GGAGTGAGAGGTGGAACACAGCCTGGATATGTATACAAGAACAGCATTAAGGTGAGCTGCCTGGGACTGGAGGGG AACCTCCAAGGTGACCCTTGCCGCTTTGCACTGACCTCCAGAGGGCCAGAGGGTGGGATCCAGCGCTATGTCCTG CAGGCTGCAGACCCTGCTATCAGTCAGGCCTGGATCAAGCATGTGGCTCAGATCTTGGAGAGCCAACGGGACTTC CTCAACGCATTGCAGTCACCCATTGAGTACCAGAGACGGGAGAGCCAGACCAACAGCCTGGGGCCGAAGAGGG TCTCTCCCCTCTCTGCTGCTGTCACCCAAAGGGGAGGTGGCCAGAGCCCTCTTGCCACTGGATAAACAGGCCCTT $\tt CTTGCCAAGCTGGATGAAGATGAGCTG{\color{red}{\textbf{TAA}}} CTGGTGAAAACCATGGGGGTGGTGCTGACTCAGCCGCCTATTCCC$. CAAGGAGCTTCAGGGCAGTCCTTCTGGCACTGCTCCAGAATTCCTCCTTCTTGGTGTGTCTGGAGGGTGGGCAAG GCTGGGAGGGATATCAACTTGGAGGAGAACACCTAGACCCAAGGACTTTTTTCTGCCCAAGGAACACAGTTTCCT GGGGCCAGATAGAAATTATTGGTTTTGTTTTTAATTTTGTTTTTCCTGTTTTCTGAGAATAAAGGTTTTGTTAT

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IVEGYMATMAAQGVPESLRGRDRIVFGNIQQIYEWHRDYFLQELQRCLKDPDWLAQLFIKHERRLHMYVVYCQNK
PKSEHVVSEFGDSYFEELRQQLGHRLQLNDLLIKPVQRIMKYQLLLKDFLKYYNRAGMDTADLEQAVEVMCFVPK
RCNDMMTLGRLRGFEGKLTAQGKLLGQDTFWVTEPEAGGLLSSRGRERRVFLFEQIIIFSEALGGGVRGGTQPGY
VYKNSIKVSCLGLEGNLQGDPCRFALTSRGPEGGIQRYVLQAADPAISQAWIKHVAQILESQRDFLNALQSPIEY
QRRESQTNSLGRPRGPGVGSPGRIRLGDQAQGSTHTPINGSLPSLLLSPKGEVARALLPLDKQALGDIPQAPHDS
PPVSPTPKTPPCQARLAKLDEDEL

TTGCACTCTCCCACACCCTTTTCTTTTCGTCCGCTCTTCGCTTATTTCTCCCGCCGTCTCCTCTGCATAAGAAGG GGAACGAAAG<u>ATG</u>GCGGCGGAAACGCTGCTGTCCAGTTTGTTAGGACTGCTGCTTCTGGGACTCCTGTTACCCGC GTTGCCTGTCATGGGAGGGCAGAGCCAATCTTCGGACGTGGTGATTGTCTCCTCTAAGTACAAACAGCGCTATGA GTGTCGCCTGCCAGCTGGAGCTATTCACTTCCAGCGTGAAAGGGAGGAGGAAACACCTGCTTACCAAGGGCCTGG CTGTTATGGACGCCACATCCAGCAATACCACATGGAAGATTCAGAGATCAAAGGTGAAGTCCTCTATCTCGGCTA CTACCAATCAGCCTTCGACTGGGATGATGAAACAGCCAAGGCCTCCAAGCAGCATCGTCTTAAACGCTACCACAG CCAGACCTATGGCAATGGGTCCAAGTGCGACCTTAATGGGAGGCCCGGGAGGCCGAGGTTCGGTTCCTCTGTGA CGAGGGTGCAGGTATCTCTGGGGACTACATCGATCGCGTGGACGAGCCCTTGTCCTGCTCTTATGTGCTGACCAT CCCTTCCCTACAGCCTGAGGAGTACATGGCCTACGTTCAGAGGCAAGCCGACTCAAAGCAGTATGGAGATAAAAT CATAGAGGAGCTGCAAGATCTAGGCCCCCAAGTGTGGAGTGAGACCAAGTCTGGGGTGGCACCCCAAAAGATGGC AGGTGCGAGCCCGACCAAGGATGACAGTAAGGACTCAGATTTCTGGAAGATGCTTAATGAGCCAGAGGACCAGGC CCCAGGAGGGGGGGGGGCCGGCTGAGGAGCAGGACCCAAGCCCTGAGGCAGCAGATTCAGCTTCTGGTGCTCC CAATGATTTTCAGAACACGTGCAGGTCAAAGTCATTCGAAGCCCTGCGGATTTGATTCGATTCATAGAGGAGCT GAAAGGTGGAACAAAAAAGGGGAAGCCAAATATAGGCCAAGAGCCTGTGGATGATGCTGCAGAAGTCCCTCA TGAGGATGAAGATGAGGAACGGCAGTTACTGGGAGAATTTGAGAAGGAACTGGAAGGGATCCTGCTTCCGTC AGACCGAGACCGGCTCCGTTCGGAGGTGAAGGCTGGCATGGAGCGGGAACTGGAGAACATCATCCAGGAGACAGA GAAAGAGCTGGACCCAGATGGGCTGAAGAAGGAGTCAGAGCGGGATCGGGCAATGCTGGCTCTCACATCCACTCT CAACAAACTCATCAAAAGACTGGAGGAAAAACAGAGTCCAGAGCTGGTGAAGAAGCACAAGAAAAAGAGGGTTGT CCCCAAAAAGCCTCCCCCATCACCCCAACCTACAGAGGAGGATCCTGAGCACAGAGTCCGGGTCCGGGTCACCAA GCTCCGTCTCGGAGGCCCTAATCAGGATCTGACTGTCCTCGAGATGAAACGGGAAAACCCACAGCTGAAACAAAT CGAGGGGCTGGTGAAGGAGCTGCTGGAGAGGGAGGGACTCACAGCTGCAGGGAAAATTGAGATCAAAATTGTCCG CTTCAATATCTTGGTGCCGGGAGCTGAAGAGGCCCAGAAGGAACGCCAGCGGCAGAAAGAGCTGGAGAGCAATTA CCGCCGGGTGTGGGGCTCTCCAGGTGGGGAGGCCACAGGGGACCTGGACGAATTTGACTTC**TGA**GACCAACACTA CACTTGACCCTTCACGGAATCCAGACTCTTCCTGGACTGGCTTGCCTCCCCACCTCCCCACCCTGGAACCCC TGAGGGCCAAACAGCAGAGTGGAGCTGAGCTGTGGACCTCTCGGGCAACTCTGTGGGTGTGGGGGCCCTGGGTGA ATGCTGCTGCCCCTGCTGGCAGCCACCTTGAGACCTCACCGGGCCTGTGATATTTGCTCTCCTGAACTCTCACTC AATCCTCTCCTCTCTGTGGCTTTTCCTGTTATTGTCCCCTAATGATAGGATATTCCCTGCTGCCTACCTGG AGATTCAGTAGGATCTTTTGAGTGGAGGTGGGTAGAGAGCAAGGAGGCAGGACACTTAGCAGGCACTGAGCA AGCAGGCCCCCACCTGCCCTTAGTGATGTTTTGGAGTCGTTTTTACCCTCTTCTATTGAATTGCCTTGGGATTTCCT TCTCCCTTTCCCTGCCCACCCTGTCCCCTACAATTTGTGCTTCTGAGTTGAGGAGCCTTCACCTCTGTTGCTGAG AACAATCAGGTTTCTAAATAAACAACTGGACCATCA

MAAETLLSSLLGLLLLGLLPASLTGGVGSLNLEELSEMRYGIEILPLPVMGGQSQSSDVVIVSSKYKQRYECRL PAGAIHFQREREEETPAYQGPGIPELLSPMRDAPCLLKTKDWWTYEFCYGRHIQQYHMEDSEIKGEVLYLGYYQS AFDWDDETAKASKQHRLKRYHSQTYGNGSKCDLNGRPREAEVRFLCDEGAGISGDYIDRVDEPLSCSYVLTIRTP RLCPHPLLRPPPSAAPQAILCHPSLQPEEYMAYVQRQADSKQYGDKIIEELQDLGPQVWSETKSGVAPQKMAGAS PTKDDSKDSDFWKMLNEPEDQAPGGEEVPAEEQDPSPEAADSASGAPNDFQNNVQVKVIRSPADLIRFIEELKGG TKKGKPNIGQEQPVDDAAEVPQREPEKERGDPERQREMEEEEDEDEDEDEDEDETQLLGEFEKELEGILLPSDRD RLRSEVKAGMERELENIIQETEKELDPDGLKKESERDRAMLALTSTLNKLIKRLEEKQSPELVKKHKKKRVVPKK PPPSPQPTEEDPEHRVRVRVTKLRLGGPNQDLTVLEMKRENPQLKQIEGLVKELLEREGLTAAGKIEIKIVRPWA EGTEEGARWLTDEDTRNLKEIFFNILVPGAEEAQKERQRQKELESNYRRVWGSPGGEGTGDLDEFDF

3992/6881 FIGURE 3681

CTGTCGGGGTCCTGGAAGACGGTCCCCAATACCCTCCCCCAAGTCCTTGGGACCACTTGGGTCCCCAGAGCTGG GGAGATGGTTTGTGGCGGCTTTGCCTGCTCCAAGAATGCGCTTTGCGCTCTCAACGTGGTCTACATGCTGGTGAG CTTGTTGCTCATTGGAGTGGCTGCTTGGGGCCAGGGCCTGGGTCTGGTGTCCAGCATCCACATCATCGGCGGAGT CATTGCTGTGGGAGTCTTCCTTCTCTTATTGCAGTGGCTGGACTGGTGGTGCTGTCAACCACCACCAAGTCCT GCTGTTCTTTACATGATCATCCTTGGTTTGGTCTTCATCTTCCAATTTGTAATCTCTTGCTCATGTCTGGCTAT TAACCGAAGCAAACAGACGGTCATCAATGCTTCTTGGTGGGTCATGAGCAACAAGACTCGGGATGAACTGGA AAGAAGTTTTGATTGTTGTGGCTTATTCAACCTCACAACCCTGTATCAACAAGATTATGATTTCTGCACTGCAAT CTGCAAGAGCCAGAGCCCCACATGCCAGATGTGTGGAGAAAAGTTTCTTAAGCATTCAGACGAAGCCCTGAAAAT CCTAGGGGGTGTTGGACTCTTCTTTAGCTTTACAGAGATCCTTGGTGTTTTGGCTAGCAATGAGATTTCGGAATCA ${\tt GAAGGATCCTAGAGCCAACCCCAGTGCCTTTCTA} \underline{{\tt TGA}} {\tt GACTTTGGATCCTTCTGACTTTTCTTCTGCTCTCTA}$ AGCTTTCTCTTCCTCCCTTAGGGAATATCTAGGGTCTGTAACCGTTTTGGTTTGAGAAAAAGGAAAAGGCCCCCTTG TCACATCCTCTAAAATTGATGGAATAGCAAGACTTTATGCCTTGACATATTTTAGTGGGAGCCAGACTATAAGGA ATAAAAGGAAAACTTTCTTCCTCTCTCCCAAGAGGATATGGGAAGCTTCTGTGAGTGCATAGGATGGGGGGCTG GAGTCATTCTTAGCTGTTTCCCTTCTCTCTCTCATATACTGGATCACCTCAACATACCCTGGTGTGGCTCTAAGG GTAAATCAGGGATAGGGCCAAGGAAAACAACCAAGAACTCTTTCCTGTAATAAGCAGGATCCAGTTTGAGAAA TGCCCAGGCTGGAGTGCAATGGCATGATCTCGGCTCACCGCAACCTCTGCCTCCCGGGTTCAAGCGATCCTCCTG $\verb|CCTCAGTCTCCCAAGTAGCTGGGATTACAGGTGTGCACCACCGCCTGACTAATTTTGTATTTTAGTAGAGAC| \\$ AGGGTTTCACCATGTTAGTCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCCGCGTTGGCCTCCCAACG TGCTGGGATTATAGGCGTGAGCCACCACCCCCCCCTAAAATCCATATTCAAAGAAGCAATTTCAGTTCCTTTCT AAGCTTTGTCAGTCAAGGGGCTCCACTGACTTCCTAGGCCCTGTAATTTAACCAGTCTTTAAGGTTTTGCAGGAA AAAAAAAA

MVCGGFACSKNALCALNVVYMLVSLLLIGVAAWGKGLGLVSSIHIIGGVIAVGVFLLLIAVAGLVGAVNHHQVLL FFYMIILGLVFIFQFVISCSCLAINRSKQTDVINASWWVMSNKTRDELERSFDCCGLFNLTTLYQQDYDFCTAIC KSQSPTCQMCGEKFLKHSDEALKILGGVGLFFSFTEILGVWLAMRFRNQKDPRANPSAFL

3994/6881 FIGURE 3683

AGCCCTCCCAGTTTCCGCGCGCCTCTTTGGCAGCTGGTCACATGGTGAGGGTGGGGGGTGAGGGGGCCTCTCTAGC TTGCGGCCTGTGTCTATGGTCGGGCCCTCTGCGTCCAGCTGCTCCGGACCGAGCTCGGGTGTATGGGGCCCGTAGG AACCGGCTCCGGGGCCCCGATAACGGGCCGCCCCACAGCACCCCGGGCTGGCGTGAGGGTCTCCCTTGATCTGA ${\tt GA} \underline{\textbf{ATG}} \texttt{GCTACCTCTGATATGAGCCAGTGGCTGAAATTGGTGTCGGTGCCTATGGGACAGTGTACAAGGCCCGTG}$ TGGACGTCTGTGCCACATCCCGAACTGACCGGGAGATCAAGGTAACCCTGGTGTTTGAGCATGTAGACCAGGACC TAAGGACATATCTGGACAAGGCACCCCCACCAGGCTTGCCAGCCGAAACGATCAAGGATCTGATGCGCCAGTTTC TAAGAGGCCTAGATTTCCTTCATGCCAATTGCATCGTTCACCGAGATCTGAAGCCAGAGAACATTCTGGTGACAA GTGGTGGAACAGTCAAGCTGGCTGACTTTGGCCTGGCCAGAATCTACAGCTACCAGATGGCACTTACACCCGTGG TTGTTACACTCTGGTACCGAGCTCCCGAAGTTCTTCTGCAGTCCACATATGCAACACCTGTGGACATGTGGAGTG ${\tt AAATCTTTGACCTGATTGGGCTGCCTCCAGAGGATGACTGGCCTCGAGATGTATCCCTGCCCCGTGGAGCCTTTC}$ $\tt CCCCCAGAGGGCCCCGCCCAGTGCAGTCGGTGGTACCTGAGATGGAGGAGTCGGGAGCACAGCTGCTGCAGAAA$ TGCTGACTTTTAACCCACACAAGCGAATCTCTGCCTTTCGAGCTCTGCAGCACTCTTATCTACATAAGGATGAAG GGCAATCTTTGCCTTTATCTCTGAGGCTATGGAGGGTCCTCCTCCATCTTTCTACAGAGATTACTTTGCTGCCTT AATGACATTCCCCTCCCACCTCTCTTTTGAGGCTTCTCCTTCTCCTTCCCATTTCTCTACACTAAGGGGTATGT TCCCTCTTGTCCCTTTCCCTACCTTTATATTTGGGGTCCTTTTTTATACAGGAAAAACAAAACAAAGAAATAATG

3995/6881 FIGURE 3684

MATSRYEPVAEIGVGAYGTVYKARDPHSGHFVALKSVRVPNGGGGGGGLPISTVREVALLRRLEAFEHPNVVRLM DVCATSRTDREIKVTLVFEHVDQDLRTYLDKAPPPGLPAETIKDLMRQFLRGLDFLHANCIVHRDLKPENILVTS GGTVKLADFGLARIYSYQMALTPVVVTLWYRAPEVLLQSTYATPVDMWSVGCIFAEMFRRKPLFCGNSEADQLGK IFDLIGLPPEDDWPRDVSLPRGAFPPRGPRPVQSVVPEMEESGAQLLLEMLTFNPHKRISAFRALQHSYLHKDEG NPE

WO 2004/030615 PCT/US2003/028547

3997/6881 FIGURE 3686

MATSRYEPVAEIGVGAYGTVYKARDPHSGHFVALKSVRVPNGGGGGGGLPISTVREVALLRRLEAFEHPNVVRLM DVCATSRTDREIKRCFVESLSSVETLKPTSWAKSLT

 ${\tt GGGGTTGAGATATGATGCTCAGGAGAAGCGCTTTCTTTCGCGAGCACCCTGAACCAGACC} {\color{red} \underline{\bf ATG}} {\color{blue} \underline{\bf ATG}} {\color{blue} \underline{\bf ACCCAGACCCTC}}$ AAGTACGCCTCCAGAGTGTTCCATCGCGTCCGCTGGGCGCCCGAGTTGGGCCGCCTCCCTAGGCTACCGAGAGTAC CACTCAGCACGCCGGAGCTTGGCAGACATCCCAGGCCCCTCTACGCCCAGCTTTCTGGCCGAACTTTTCTGCAAG GGGGGGCTGTCGAGGCTACACGAGCTGCAGGTGCAGGCCGCGCGCACTTCGGGCCGGTGTGGCTAGCCAGCTTT GGGACAGTGCGCACCGTGTACGTGGCTGCCCCTGCACTCGTCGAGGAGCTGCTGCGACAGGAGGGACCCCGGCCC GAGCGCTGCAGCTTCTCGCCCTGGACGGAGCACCGCCGCCGCCAGCGGGCTTGCGGACTGCTCACTGCGGAA GGAACCCTGAACAACGTAGTCTGCGACCTTGTGCGGCGTCTGAGGCGCCAGCGGGGACGTGGCACGGGGCCCCC GCCCTGGTTCGGGACGTGGCGGGGGAATTTTACAAGTTCGGACTGGAAGGCATCGCCGCGGTTCTGCTCGGCTCG CGCTTGGGCTGCCTGGAGGCTCAAGTGCCACCCGACACGGAGACCTTCATCCGCGCTGTGGGCTCGGTGTTTGTG TCCACGCTGTTGACCATGGCGATGCCCCACTGGCTGCGCCACCTTGTGCCTGGGCCCTGGGGCCGCCTCTGCCGA GACTGGGACCAGATGTTTGCATTTGCTCAGAGGCACGTGGAGCGGCGAGAGGCAGAGGCAGCCATGAGGAACGGA TCCATCCTGGGAAATGTGACAGAGTTGCTATTGGCGGGAGTGGACACGGTGTCCAACACGCTCTCTTGGGCTCTG TATGAGCTCTCCCGGCACCCCGAAGTCCAGACAGCACTCCACTCAGAGATCACAGCTGCCCTGAGCCCTGGCTCC AGTGCCTACCCCTCAGCCACTGTTCTGTCCCAGCTGCCCCTGCTGAAGGCGGTGGTCAAGGAAGTGCTAAGACTG TACCCTGTGGTACCTGGAAATTCTCGTGTCCCAGACAAAGACATTCATGTGGGTGACTATATTATCCCCAAAAAT ACGCTGGTCACTCTGTGTCACTATGCCACTTCAAGGGACCCTGCCCAGTTCCCAGAGCCAAATTCTTTTCGTCCA GCTCGCTGGCTGGGGGAGGGTCCCACCCCACCCATTTGCATCTCTTCCCTTTGGCTTTGGCAAGCGCAGCTGT ATGGGGAGACGCCTGGCAGAGCTTGAATTGCAAATGGCTTTGGCCCAGATCCTAACACATTTTGAGGTGCAGCCT GAGCCAGGTGCGGCCCCAGTTAGACCCAAGACCCGGACTGTCCTGGTACCTGAAAGGAGCATCAACCTACAGTTT GCACAAGACCAAGGTATACATCTTCCCCTAATGCCTATCTGACCAAACTGGATAGAACCACCATAGTGAAGTGTG AGGCGGCCCTGACCAATGTGTGAAGTATGCACTTGGCCTGACTCAGGAAGCCAGGTGAGAAAACCATGGTCTCTC TGCTTGCTTGGCCCTTCTGATCATGTATGCATCCCCCAAGGATGAAATCAGATTTTAACTAATAATGCTGGATGG CCTGAGGAAAGATTCAACTGCCTCTCTTTTTGGGCTTTCATAGTGTTCATTGATGCTGCTGGCTAAGCATTTATC AGGAAGGGTGAAGCCTTATTTGTTTTTTATGTCCCCTGCCAGGGCCTGTCTCTGACTAGGTGTCACCATACACAT CTTTGTCTTGCCCCTAGGAAGGTGAATCTGCCCTAGCCTGGTTTACGGTTTCTTATAACTCTCCTTTGCTCTCTG GCCACTATTAAGTGGGTTTGCCCCATCACTTAGTTCTCAGGCAGAGACATCTTTGGGCCTGTCCCTGCCCAGGCC TCTGGCTTTTTATATTGAAAATTTTTAAATATTCACAAATTTTAGAATAAATCAAATATTCCATTCTT

MTQTLKYASRVFHRVRWAPELGASLGYREYHSARRSLADIPGPSTPSFLAELFCKGGLSRLHELQVQGAAHFGPV WLASFGTVRTVYVAAPALVEELLRQEGPRPERCSFSPWTEHRRCRQRACGLLTAEGEEWQRLRSLLAPLLLRPQA AARYAGTLNNVVCDLVRRLRRQRGRGTGPPALVRDVAGEFYKFGLEGIAAVLLGSRLGCLEAQVPPDTETFIRAV GSVFVSTLLTMAMPHWLRHLVPGPWGRLCRDWDQMFAFAQRHVERREAEAAMRNGGQPEKDLESGAHLTHFLFRE ELPAQSILGNVTELLLAGVDTVSNTLSWALYELSRHPEVQTALHSEITAALSPGSSAYPSATVLSQLPLLKAVVK EVLRLYPVVPGNSRVPDKDIHVGDYIIPKNTLVTLCHYATSRDPAQFPEPNSFRPARWLGEGPTPHPFASLPFGFGKRSCMGRRLAELELQMALAQILTHFEVQPEPGAAPVRPKTRTVLVPERSINLQFLDR

GGCCTGCGCCTCCACGTGGATTTGGTAGAGAAACCCCGGACTGGGATCATGCCAGCCGAGACTCGGAACGTGGCC GGAGCAGAGGCCCCACCGCCCCAGAAGCGCTACTACCGGCAACGTGCTCACTCCAACCCCATGGCGGACCACACG CTGCGCTACCCTGTGAAGCCAGAGGAGATGGACTGGTCTGAGCTATACCCAGAGTTCTTCGCTCCACTCAA AATCAGAGCCACGATGACCCAAAGGATAAGAAAGAAAAGAGAGCTCAGGCCCAAGTGGAGTTTGCAGACATAGGC TGTGGCTATGGTGGCCTGTTAGTGGAACTGTCACCGCTGTTCCCAGACACACTTATTCTGGGTCTGGAGATCCGG GTGAAGGTCTCAGACTATGTACAAGACCGGATTCGGGCCCTACGCGCAGCTCCTGCAGGTGGCTTCCAGAACATC GCCTGTCTCCGTAGCAATGCCATGAAGCACCTTCCTAACTTCTTCTACAAGGGCCAGCTGACAAAGATGTTCTTC CTCTTCCCCGACCCACATTTCAAGCGGACAAAGCACAAGTGGCGAATCATCAGTCCCACCCTGCTAGCAGAATAT GCCTACGTGCTAAGAGTTGGGGGGCTGGTGTATACCATAACCGATGTGCTGGAGCTACACGACTGGATGTGCACT CATTTCGAAGAGCACCCACTGTTTGAGCGTGTGCCTCTGGAGGACCTGAGTGAAGACCCCGTTGTGGGACATCTA GGCACCTCAACTGAGGAGGGAAGAAGTTCTACGTAATGGAGGGAAGAATTTCCCAGCCATCTTCCGAAGAATA GACCTCGTCTCCCAGGGATTAGAGAAAAGAGCAGGAGTCCTGGGTCTTCCCAGTTGAGACTGCTGGAGCTGAGAC ACAGTACTCTTTAAAGAAGGTGGGGAGCTGCCCAGGGCAGAACCCACTGGTGTTCATGACTACCCCTGGCTCCT TGAGGAATGTAGTCCATCTAAACTGCTTGCTAGGCTCAATTACCACTTCTGTTTGCTTTGTGGATCCTGGGATAA

MAAETRNVAGAEAPPPQKRYYRQRAHSNPMADHTLRYPVKPEEMDWSELYPEFFAPLTQNQSHDDPKDKKEKRAQ AQVEFADIGCGYGGLLVELSPLFPDTLILGLEIRVKVSDYVQDRIRALRAAPAGGFQNIACLRSNAMKHLPNFFY KGQLTKMFFLFPDPHFKRTKHKWRIISPTLLAEYAYVLRVGGLVYTITDVLELHDWMCTHFEEHPLFERVPLEDL SEDPVVGHLGTSTEEGKKVLRNGGKNFPAIFRRIQDPVLQAVTSQTSLPGH

GGCCTGCGCCTCCACGTGGATTTGGTAGAGAAACCCCGGACTGGGATCATCGCAGCCGAGACTCGGAACGTGGCC GGAGCAGAGGCCCCACCGCCCCAGAAGCGCTACTACCGGCAACGTGCTCACTCCAACCCCATGGCGGACCACACG CCAGAAAGGGCAGTTACCCGGCCAGGGTCACATCAACCGCCAGAAGTGGAGTTGGGCAGCCCTGTGAAGCCAGAG GATAAGAAAGAAAGAGAGCTCAGGCCCAAGTGGAGTTTGCAGACATAGGCTGTGGCTATGGTGGCCTGTTAGTG GAACTGTCACCGCTGTTCCCAGACACACTTATTCTGGGTCTGGAGATCCGGGTGAAGGTCTCAGACTATGTACAA GACCGGATTCGGGCCCTACGCGCAGCTCCTGCAGGTGGCTTCCAGAACATCGCCTGTCTCCGTAGCAATGCCATG AAGCACCTTCCTAACTTCTTCTACAAGGGCCAGCTGACAAAGATGTTCTTCCTCTTCCCCGACCCACATTTCAAG CGGACAAAGCACAAGTGGCGAATCATCAGTCCCACCCTGCTAGCAGAATATGCCTACGTGCTAAGAGTTGGGGGG CTGGTGTATACCATAACCGATGTGCTGGAGCTACACGACTGGATGTGCACTCATTTCGAAGAGCACCCACTGTTT GAGCGTGTGCCTCTGGAGGACCTGAGTGAAGACCCCGTTGTGGGACATCTAGGCACCTCAACTGAGGAGGGGAAG AAAGTTCTACGTAATGGAGGGAAGAATTTCCCAGCCATCTTCCGAAGAATACAAGATCCCGTCCTCCAGGCAGTG ACCTCCCAAACCAGCCTGCCTGGTCACTGACTGCTTACTCTACCTTAGCTGGACCTCGTCTCCCAGGGATTAGAG AAAAGAGCAGGAGTCCTGGGTCTTCCCAGTTGAGACTGCTGGAGCTGAGACACAGTACTCTCTTAAAGAAGGTGG GGAGCTGCCCAGGGCAGAACCCACTGGTGTTCATGACTACCCCTGGCTCCTCTCACCTTGTCCCTCCACTGCCAA CAGAAAACAAAGCAGCTGACTGAGATGGTCAAAGGACTTTGGACCATAGGGGATCTTTGGAAGGCTGTGGGGTCT TGCTCTTCCTTAGCACTCCTTTCTCCTTGTGAGATCTCTCCTCAGCTGGAATGAGGAATGTAGTCCATCTAAACT GCTTGCTAGGCTCAATTACCACTTCTGTTTGCTTTGTGGATCCTGGGATAACATGTATATGTGTACACATGCCTA TTCTGCCATTTCTCAGGAAAGGGTGGAGTATGTATCATATGCCTTCTACCATCCTCCTGTCCTCCCTGCGTAA **АААААААААААААА**

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4003/6881 FIGURE 3692

MAAETRNVAGAEAPPPQKRYYRQRAHSNPMADHTLR

 ${\tt GGCCTGCGCCTCCACGTGGATTTGGTAGAGAAACCCCGGACTGGGATC} \underline{{\tt ATC}}{\tt GCAGCCGAGACTCGGAACGTGGCCC}$ GGAGCAGAGGCCCCACCGCCCCAGAAGCGCTACTACCGGCAACGTGCTCACTCCAACCCCATGGCGGACCACACG AATCAGAGCCACGATGACCCAAAGGATAAGAAAGAAAAGAGAGCTCAGGCCCAAGTGGAGTTTGCAGACATAGGC TGTGGCTATGGTGGCCTGTTAGCTGACAAAGATGTTCTTCCTCTTCCCCGACCCACATTTCAAGCGGACAAAGCA CAAGTGGCGAATCATCAGTCCCACCCTGCTAGCAGAATATGCCTACGTGCTAAGAGTTGGGGGGGCTGGTGTATAC ${\tt CATAACCGATGTGCTGGAGCTACACGACTGGATGTGCACTCATTTCGAAGAGCACCCACTGTT} \underline{{\tt TCA}}{\tt GCGTGTGCC}$ TCTGGAGGACCTGAGTGAAGACCCCGTTGTGGGACATCTAGGCACCTCAACTGAGGAGGGGAAGAAAGTTCTACG TAATGGAGGGAAGAATTTCCCAGCCATCTTCCGAAGAATACAAGATCCCGTCCTCCAGGCAGTGACCTCCCAAAC CAGCCTGCCTGGTCACTGACTGCTTACCTTAGCTGGACCTCGTCTCCCAGGGATTAGAGAAAAGAGCAGG AGTCCTGGGTCTTCCCAGTTGAGACTGCTGGAGCTGAGACACAGTACTCTCTTAAAGAAGGTGGGGGAGCTGCCCA GGGCAGAACCCACTGGTGTTCATGACTACCCCTGGCTCCTCTCACCTTGTCCCTCCACTGCCAACAGAAAACAAA GCAGCTGACTGAGATGGTCAAAGGACTTTGGACCATAGGGGATCTTTGGAAGGCTGTGGGGGTCTTGCTCTT TCAATTACCACTTCTGTTTGCTTTGTGGATCCTGGGATAACATGTATATGTGTACACATGCCTATTCTGCCATTT $\tt CTCAGGAAAGGGTGGAGTATGTATCATATGCCTTCTACCATCCTCCTGTCCTCCCTGCGTAAGACTTGACCTG$ AAAAAAA

MAAETRNVAGAEAPPPQKRYYRQRAHSNPMADHTLRYPVKPEEMDWSELYPEFFAPLTQNQSHDDPKDKKEKRAQ AQVEFADIGCGYGGLLADKDVLPLPRPTFQADKAQVANHQSHPASRICLRAKSWGAGVYHNRCAGATRLDVHSFR RAPTV WO 2004/030615 PCT/US2003/028547

4006/6881 FIGURE 3695

GGGAGCTACCCGGCTGGGTCTCTTCTGCGTCAGTCGCCCCAGCCAAGGCACACATTTTATGCTGGGCCCCGTCTG TCTGCCTCGGCCTCCAGCAAGGAGCTCCTCATGAAGCTGCGGCGGAAAACAGGCTACTCCTTTGTAAATTGCAAG TGGAGCAAAGCTGCCAAGCTCCAAGGGAAGAACAAAGAAGGCCTGATTGGGCTGTTGCAGGAAAGAACACA ACTGTATTAGTAGAGGTAAACTGTGAGACAGATTTTGTTTCTAGAAATTTAAAATTTCAACTGTTGGTCCAGCAA GTAGCCCTTGGAACCATGATGCATTGTCAGACCCTAAAGGATCAACCCTCTGCATACAGTAAAGTGCAGTGGCTC ACGCCTGTAAACCTAGCACTTTGGGAGGCTGAAGCAGGTGGATCACTTGAGGGTTTCTTGAATTCCTCTGAGCTT TCTGGACTTCCAGCTGGGCCTGACAGAGAGGCTCACTCAAGGATCAGTTGGCTTTAGCAATTGGAAAACTGGGA GAAAACATGATTCTTAAACGAGCTGCATGGGTGAAGGTGCCATCTGGGTTCTACGTTGGCTCTTATGTCCACGGA GCAATGCAGAGTCCCTCACTTCACAAGCTGGTGCTGGGGAAGTATGGGGCCCTGGTCATCTGTGAGACGTCTGAA ${\tt TCCCTGGACGATGAGCCTGGGGGAGAGGCAGAGACTAAGATGCTGTCCCAGCCGTATTTGCTGGATCCCTCCATT}$ ACCTTGGGGCAGTATGTGCAGCCTCAGGGGGTGTCGGTAGTAGACTTTGTGCGGTTTGAATGTGGAGAAGGTGAA ${\tt GAGGCAGCAGAAACTGAA}{\color{blue}{\bf TAG}{\bf GTTCCAGAGACTTTTGGCCCAGGAGGAATATTTACTTTTAGCTCTGGACATCAT}$ TACAAAAAGGAATATTTCCCAAACCTCTTCAGACCGAGAATGCATGGGTAAAATTATTAAATAGTTGTATAATAA

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MSLLRSLRVFLVARTGSYPAGSLLRQSPQPRHTFYAGPRLSASASSKELLMKLRRKTGYSFVNCKKALETCGGDL KQAEIWLHKEAQKEGWSKAAKLQGRKTKEGLIGLLQEGNTTVLVEVNCETDFVSRNLKFQLLVQQVALGTMMHCQ TLKDQPSAYSKVQWLTPVNLALWEAEAGGSLEGFLNSSELSGLPAGPDREGSLKDQLALAIGKLGENMILKRAAW VKVPSGFYVGSYVHGAMQSPSLHKLVLGKYGALVICETSEQKTNLEDVGRRLGQHVVGMAPLSVGSLDDEPGGEA ETKMLSQPYLLDPSITLGQYVQPQGVSVVDFVRFECGEGEEAAETE